MIDWEST DEALER ISSUE
Pages 9-16

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Gypsy Moth Survey Shows Additional Areas Need Control

Plans Call for Two To Four Times More Spraying in 1957

WASHINGTON — A 7½-million-acre trapping survey for male gypsy moths just completed in New York, New Jersey and Pennsylvania reveals that control measures will be needed in some additional counties next year against this destructive forest pest. Preliminary findings from the survey were released recently by the U.S. Department of Agriculture.

The gypsy moth has become established at several points in Sussex County, N.J., and in Pike and Wayne Counties, Pa., south and west of the present federal quarantine line marking off the area invaded by the pest, which includes most of the northeastern U.S.

A few moths were found in Monroe County, Pa., and in Broome and Chenango Counties, N.Y. One lone moth was trapped in each of three other New Jersey counties—Dergen, Morris, and Warren—and also in Oswego County, N.Y., some 50 miles

(Continued on page 4)

Inside You'll Find

World Report 8
Over the Counter 9
Field Notes 9
What's New 10
Farm Service Data 13
Oscar & Pat 15
Editorials 22
Meeting Memos 23
Index of Advertisers 23

Advisory Group Urges Action on Loss of Farm Land

WASHINGTON — The Soil and Water Conservation Advisory Committee of the U.S. Department of Agriculture Oct. 9 asked that USDA take steps to help check the rapid conversion of good agricultural land to urban and other non-agricultural uses.

Members of the committee recommended, as a first step, that the department take leadership in calling attention to the executive and legislative branches of government the need for establishing a suitable mechanism to prevent non-agricultural use or appropriation, by the federal government itself, of soils well suited to farming. They also asked the department to help inform all the people as to the nature of this growing problem.

D. A. Williams, administrator of the USDA's Soil Conservation Service, reported to the group that about 17 million acres of cultivatable land have been converted to non-agricultural use in the past 15 years and that the rate of such conversion is increasing.

The advisory committee, under chairmanship of Ervin L. Peterson, assistant secretary of agriculture, also urged the department to hasten completion of the national soil survey, noting that many private and public programs depend on availability of accurate soil data.

Other topics discussed included credit for soil and water conservation, progress of the Great Plains program, national soil and water conservation needs inventory, the soil bank program, agricultural conservation program, rural development program, watershed protection and flood prevention work, and forestry and wildlife conservation policies of USDA.

Formulators Told That Education of User Is Key Pesticide Problem

By LAWRENCE A. LONG
Editor of Croplife

PINEHURST, N.C. — Every business in the U.S. depends upon the prosperity of economic health of the farmer, and in fact the role of this country as a world leader also hinges on this factor, Harold D. Cooley (D., N.C.), chairman of the House Committee on Agriculture, said in a keynote address at the annual meeting of the Carolinas-Virginia Pesticide Formulators Assn., held at the Holly Inn here Oct. 8-10.

Speaking at the banquet on the evening of Oct. 9 the congressman told the crowd of some 150 that "agriculture is in trouble . . . deep trouble and it needs all of its friends. Unless we can check the downward trend of agricultural income our whole economy will be destroyed."

Stoutly defending high supports for farm products, Rep. Cooley declared that "our nation would perish if farmers were placed under the cruel law of supply and demand."

The congressman emphasized that when the farmer's purchasing power is reduced the impact is felt immediately in every part of the economy.

Though describing his talk as "nonpartisan," Rep. Cooley called the soil bank bill "a lot of bunk," and said that its basic idea is not new.

In 1934, he said, more than $600 million was spent to build up the soil of the nation. But, he declared, the present version of the soil bank is being abused and in many places it is merely being used to buy votes.

Other speakers appearing on the program represented experiment stations of the states included in the association's membership and a spokesman from the manufacturing industry.

Appearing on the program of Oct. 9 were Dr. Clyde F. Smith, North Carolina State College, Raleigh, and Dr. J. H. Cochran, Clemson College, Clemson, S.C.

Dr. George Ferguson, president, Geigy Agricultural Chemicals Co., New York, addressed the group on the morning of Oct. 10.

A new 25-minute sound and color film, "The Rival World," produced by Shell Chemical Co., was shown at the meeting.

In his discussion of insect problems facing the pesticide industry in the

(Continued on page 20)

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Second Highest Cotton Yield Seen By Reporting Board

WASHINGTON—A cotton crop of 13,268,000 bales, up 1% or 153,000 bales from a month ago, is forecast by the Crop Reporting Board as of Oct. 1. With harvesting well advanced, yields in central states are turning out better than anticipated a month ago and more than offset reductions in prospects in some other areas. The indicated 1956 crop is 10% less than last year's production of 14,721,000 bales and compares with the 10-year average of 13,098,000 bales.

The yield per acre of 407 lb. is the second highest of record and compares with the record high of 417 lb. in 1955 and the 10-year average of 283 lb.

Yields are exceptionally good in the central states despite heavy shedding of young fruit in late August and are at near record to record levels on irrigated land in the far western states and northwest Texas. Drouth has materially limited yields of dryland cotton in Texas and Oklahoma. While yields are better than average in the Carolinas, Georgia and Alabama, drouth and weevils caused considerable damage during the season, the reporting board said.

SOLUTIONS MEETING

SIOUX CITY, IOWA—The annual meeting and trade show of the National Nitrogen Solutions Assn. are scheduled at the Sioux City Auditorium Oct. 16-17. Talks will be heard on advertising, production of nitrogen, complete liquid fertilizers and the place of nitrogen in fertilization of Midwest crops. Wayne R. Johnson, Shenandoah, Iowa, is association president.

Consignment Selling Roundly Rapped at Industry Session

PINEHURST, N.C. — Consignment selling and guaranteed sale merchandising were roundly condemned at a session in which trade representatives were invited to voice personal opinions during the annual meeting of the Carolinas-Virginia Pesticide Formulators Assn. here Oct. 10.

The practices were referred to as being "vicious," "bad business" and "a very dangerous policy."

Solutions offered for correcting the practice ran from suggestions that the first step should be made by dealers who sell to the consumer to the plea that basic suppliers should initiate a change in policy.

In an hour's discussion which brought out many ideas and suggestions, the group aired numerous in-

(Continued on page 5)

New Jersey Fertilizer Men Hear Advice on Advertising; Caution Urged on Mixtures

NEW BRUNSWICK, N.J.—Industry must have a sincere desire to operate in a clean, fair and honorable manner if it wants to avoid complete government control in the public interest, declared Sigurd Anderson, commissioner of the Federal Trade Commission at the annual Rutgers University fertilizer conference Sept. 27.

Mr. Anderson gave about 30 examples of advertising for fertilizer and soil conditioner products that have required FTC attention. It is readily understandable, he said, that many of the claims of these advertisements—which the commission has found objectionable—are of the type that appeals to persons interested in growing gardens, lawns and flowers.

He painted a picture of an optimistic gardener, trundling out his wheelbarrowful of utensils and garden aids, willing and anxious of believe that he could duplicate the picture on the packet of seeds. Extravagant claims find ready and willing victims among persons anxious to grow more beautiful lawns than their neighbors, better gardens and prize-winning flowers.

"It is the public not versed in the true qualities of a product, falsely advertised, that the Federal Trade Commission must protect," Mr. Anderson said. "There is a greater protecting force than the Federal Trade Commission that should operate in this field, and that is the advertising conscience of the producer of the product offered for sale."

He recommended as interesting

(Continued on page 17)

Monsanto Creates New Sales Sections For Agricultural and Industrial Chemicals

ST. LOUIS—Separate sales sections for agricultural chemicals and for industrial chemicals have been organized within the sales department of Monsanto Chemical Company's inorganic chemicals division, it has been announced.

At the same time, the organization of the division's research department has been aligned to provide strengthened research activity, particularly in connection with phosphorus and nitrogen products of the division which are raw materials for various segments of the agricultural industry.

The move in both departments is the result of consolidation in the division for sales and research on nitrogen products, previously handled by the Lion Oil Co. division.

In the agricultural sales section, S. R. Clement has been appointed director of sales, and Leroy Donald has been appointed director of sales development, both with offices in St. Louis. Two assistant directors of agricultural sales also were appointed: Bernard Machen, in charge of district offices, and R. W. Goldthwaite, in charge of agricultural products. M. F. Walsh was appointed manager of product sales and Roy Spence was named manager for direct application of ammonia products.

Mr. Clement and Mr. Walsh previously were with the industrial sales department of the division. Mr. Donald, Mr. Machen and Mr. Goldthwaite recently were transferred to St. Louis from El Dorado, Ark., where they were associated with the Lion Oil Co. division. Mr. Spence, who also has been with the Lion division, will continue his activities in El Dorado.

Paul J. Talley will report to Mr. Donald as chief agriculturalist as will R. N. Lassiter as manager of agricultural technical service. Both Mr. Talley and Mr. Lassiter were previously with the Lion division, but will continue their activities at the El Dorado location for the present.

In the industrial chemicals sales section, W. R. Corey was appointed director of industrial field sales and J. B. Trotter will remain as director of industrial product sales. A newly organized section headed by Dr. P. G. Arvan as director of industrial technical service, will provide strengthened technical service for the industrial products.

The new alignment in the division's research department to back up increased agricultural activity includes four research groups under Dr. Marion D. Barnes of St. Louis as assistant research director. Mr. Barnes previously was assistant research director for the Lion Oil Co. division in El Dorado.

All of the groups will be centralized in the division's new research building in St. Louis County upon its completion next spring.

Dr. J. G. Stites has been appointed group leader for fertilizer materials study. The group is concerned principally with research on compounds products sold as raw materials to the fertilizer manufacturing industry.

Dr. L. E. Loveless heads a group concerned principally with plant and animal nutrition. Another group headed by A. P. Wood is responsible for fertilizer analytical work. The fourth agricultural research group headed by Robert T. Webber, is charged with developing plant food processing data for its fertilizer manufacturing customers.

Missouri Agronomist Lists Advantages of Fall Fertilization

COLUMBIA, MO. — Adding fertilizer this fall can help farmers make money and save work, says O. J. Coleman, University of Missouri extension soils specialist.

Mr. Coleman lists these added advantages from putting on in the fall the lime, phosphate, potash, and most of the nitrogen that would ordinarily be broadcast and plowed down in the spring:

One—fall fertilization spreads out the work load and takes the heat off during the spring rush period. This helps speed planting operations in the spring.

Two—the ground is usually firmer in the fall. Machinery pulls easier and does less damage to soil structure. Larger machines can be used that save time and labor.

Three—broadcasting and plowing down put the fertilizer in moist soil which increases its efficiency in a dry year.

Four—late summer or fall top dressing with phosphate and potash helps hold the legume in grass-legume mixtures on previously renovated pasture.

Five—the slight loss of nitrogen over the winter usually costs less than an extra trip over the field in the spring. And it's better to risk the loss of a little nitrogen than to risk not getting fertilizer on at all.

Six—in the fall, a farmer finds it easier to get the fertilizer ratio and the grades he wants.

Two Appointed as Crag Representatives

NEW YORK — Appointment of George E. Miller and James H. Jones as technical representatives for the Crag agricultural chemicals division of Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp., has been announced by Dr. R. H. Wellman, manager of Crag agricultural chemicals.

Mr. Miller specialized in agricultural chemistry and agronomy at the University of Rhode Island and received a bachelor of science degree in agriculture in 1954. Mr. Jones attended Texas A&M College, specializing in animal husbandry, and received a bachelor of science degree in agriculture last May.

Balfour, Guthrie Move Midwest Fertilizer Offices

MINNEAPOLIS, MINN. — Offices of the Midwest fertilizer division of Balfour, Guthrie & Co., San Francisco, have been transferred to the Midland National Bank Bldg., Minneapolis. The division offices formerly were in the Board of Trade Bldg., Chicago. The division is under the supervision of Emmett Wells and R. J. Finch.

DEALER CONFERENCE

NEW BRUNSWICK, N.J. — The New Jersey Pesticide Dealers Conference will be held at Rutgers University here Nov. 29. Program details are incomplete.

Advertisers who sell only to farmers—prefer Successful Farming

Business of Farming advertising pages
(Includes Agriculture & Farming, Tractors & Tractor Tires)

	1955
SUCCESSFUL FARMING	337.41
Capper's Farmer	244.67
Farm Journal	245.83

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SUCCESSFUL FARMING's circulation of 1,300,000 is 85% on-farm, working farmers. In this one magazine you get almost half the country's high income farmers—42% of all the farms earning $10,000 or more.

SF farmers are big producers of corn, grains, livestock, poultry, milk, eggs. They are interested in anything that makes their jobs easier, improves their production—including fertilizer. And they can afford to buy what they need.

Moreover in SUCCESSFUL FARMING, your advertising gets a more interested and more responsive audience—because SUCCESSFUL FARMING for fifty years has been helping the country's best farmers produce more, make more money, live better. No other medium can deliver your message so effectively, so economically.

Ask your dealers who are the SUCCESSFUL FARMING subscribers in their territories. And ask any SF office for the full story.

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Midwestern Sales Office . . . First National Bank Bldg., Peoria, Ill.
Southern Sales Office . . . Candler Building, Atlanta, Ga.

GYPSY MOTH

(Continued from page 1)

northwest of any other finding in the state.

Discovery of live male moths in an area late in the summer is not considered proof of infestation by entomologists of USDA's Agricultural Research Service, since flight or wind could carry the insects from adjacent infested areas. The extent of next year's control work will depend on additional scouting, after the leaves fall, for gypsy-moth egg clusters—which are proof that the pest has actually "moved in" to an area. Tentative long-range plans, made months ago, call for 2 to 4 times as much insecticidal spraying in 1957 as in 1956.

A 587,500-acre rectangle in northeastern Pennsylvania, northern New Jersey, and New York was the prime target of insecticidal spraying against the gypsy moth by federally contracted aircraft this summer along the southwestern edge of an area newly infested during the past two years. Capture of live moths within that area since the spraying indicates that further treatment, both within and beyond this year's limits, will be needed next year to prevent reinfestation and spread.

Traps for the summer survey were placed along the New Jersey-New York and Pennsylvania-New York border, and northward through Oneida and most of Oswego Counties, N.Y. They straddled the federal gypsy-moth quarantine line, extending a short distance within it and well beyond it southward and westward. A limited survey on either side of the line's end at the Canadian border, in northern New York, revealed no gypsy moths.

Planes sprayed 98,860 acres around an isolated spot infestation near Lansing, Mich., in the early summer in a joint federal-state eradication attempt. Only two moths have been found in 4,900 exposed traps in Michigan since the spraying, both in areas near Lansing that were never treated with insecticides. Traps and additional scouting around each find failed to turn up more moths.

A pound of DDT in a gallon of oil per acre was sprayed by aircraft on nearly a million acres in the Northeast during the past summer in the federal-state effort to halt the spread of the moth and cut down its numbers.

Secondary target of USDA's aerial spraying was a heavily infested area of almost 40,000 acres mostly north of Albany in New York.

Using aircraft and mist blowers, the state of New York also sprayed more than 50,000 acres, Connecticut almost 16,000 acres, Pennsylvania 10,000, Massachusetts 120,000, Rhode Island 15,000, and Maine 200 acres. The state of Vermont sprayed some 3,400 acres, and 600 acres in th state were sprayed under federal co tract.

In the large-scale aerial spray pr gram, up to 10 multi-engine and single-engine airplanes were us simultaneously on the job in Penns vania, New York and New Jers Maximum effective swath was 700 Up to 72,000 gallons of spray were a plied in one day. Large airplanes d the spraying of extensive wood areas, and the smaller craft we used around lakes and in areas r quiring special attention.

The entire area was scouted a laid out well in advance of the se son. A public education program w carried out during the winter mont to prepare residents of heavily-pop lated sections for the extensive oper tion. The sprayed area included v lages and cities, heavily-wooded area lake region resorts and many typ of farms, including mink, chicken a dairy farms.

Traps are not used to control th moths but to check on their wher abouts. They are baited with an a tractant obtainable only from fema moths. This year, USDA entomol gists collected more than 750,000 a tractant specimens in the northeas ern United States and more tha 700,000 in Yugoslavia and Spain f use in trapping and research in th country.

Previous attempts to isolate th natural moth attractant (gyptol) i pure form, so that its chemical struc ture might be determined, have fai ed. If the structure of the attractan can be determined, the way will b open for the synthesis of gyptol. Mor than 200,000 insect specimens hav been set aside this year so that chem ists of USDA's Agricultural Researc Service can pursue this avenue of re search. An intensive study of synthe ics as attractants for the gypsy mot has also been initiated.

University of Missouri Receives Research Grant From Olin Mathieson

COLUMBIA — The University o Missouri has received a researc grant of $7,500 from the Olin Math eson Chemical Corp., of Little Rock Ark., in support of fundamental re search to be conducted in the depart ment of soils of the College of Agri culture, it was announced Oct. 9 b John H. Longwell, dean.

Mr. Longwell said the three-yea project is to be conducted under di rection of Dr. C. Merrill Woodruff associate professor of soils, and th over-all supervision of Dr. William A Albrecht, chairman of the departmen of soils.

Called a study in "Energetics o Ionic Relationships in Soils an Plants," the project is designed t determine through physical chemistr the difference in energy by whic chemical reactions send nutrient from soil to plant root and from th root to the soil, according to D Woodruff.

Coke Oven Ammonium Sulfate Output Down

WASHINGTON — Coke oven pro duction of ammonium sulfate durin July totaled 46,515,207 lb., compare with 159,112,000 lb. in July, 1955, a cording to the Bureau of Mines. Th July work stoppage in the steel in dustry was principally responsible fo the big drop.

Sales in July totaled 44,953,800 lb compared with 135,988,000 lb. in Ju a year earlier, and stocks on hand a the end of last July were 288,259,83 lb., an increase from 218,916,895 lb. year earlier.

ACREAGE RESERVE PAYMENTS

WASHINGTON — Payments farmers participating in the 195 acreage reserve program of the so bank totaled $18,087,212.76 in 2 states reporting through Sept. 2 1956, the U.S. Department of Agri culture has announced.

A NEW MID-WEST PLANT MAKES FAST, LOW-COST DELIVERY POSSIBLE. ORDER NOW—SAVE MONEY!

There are two big reasons why you should sign *now* with Sinclair for your nitrogen solutions, anhydrous ammonia and aqua ammonia requirements.

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155 North Wacker Drive, Chicago 6, Illinois — Phone Financial 6-5900

mith-Douglass o Reopen Texas ity Chemicals

NORFOLK, VA.—Ralph B. Doug-ss, president of Smith-Douglass Co., c., announced Oct. 8 that the U.S. strict Court for the southern dis-ct of Texas has agreed to entertain reorganization petition for Texas ty Chemicals, Inc., based on a plan bmitted by Smith-Douglass.

Pending consideration by the court, e plan contemplates that Smith-uglass shall reopen and operate the xas City Chemicals plant as agent the court's trustee, and that ith-Douglass will participate in the organization proceedings on a basis ich would result in its becoming e controlling stockholder of Texas ty Chemicals when the reorganiza-n plan is consummated. A number Texas City Chemicals' creditors ve tentatively accepted the Smith-uglass plan, Mr. Douglass said.

The Coronet Phosphate Co., a divi-n of Smith-Douglass, will com-nce to ship dicalcium phosphate to d manufacturers in the West and idwest early in 1957, according to S. Rydell, Coronet president.

Coronet now produces defluorinated osphate (CDP) at Plant City, Fla., d owns substantial phosphate re-rves in Florida. It is a division of ith-Douglass Co., Inc., with head-arters at the parent company's ex-utive offices in Norfolk, Va.

The announcement pointed out that number of matters remain to be rked out before Smith-Douglass rticipation becomes binding. Details the arrangement whereby Smith-uglass would operate the Texas ty Chemicals plant or participate the reorganization plan were not ated. Through F. Eberstadt & Co., w York, N.Y., investment coun-lors, arrangements have been ef-cted to refinance Texas City Chemi-ls in the event Smith-Douglass' rticipation in the reorganization is nfirmed.

Smith-Douglass is a manufacturer d distributor of chemical fertilizers d fertilizer materials along the At-ntic Seaboard, in the Midwest and uthwest. The company produces hydrous ammonia at its San Jacin-Chemical Co. plant in Houston, xas.

Texas City Chemicals, Inc., com-eted a large dicalcium phosphate ant at Texas City, Texas, in 1954. e company encountered financial fficulties shortly after the plant was mpleted, which resulted in the sus-nsion of operations in January, 56. It has facilities for producing lphuric acid and phosphoric acid, addition to dicalcium phosphate.

Smith-Douglass personnel flew to xas City recently to commence ant start-up operations. Dale C. ieffer, technical director, will be in er-all charge of production, assist-l by W. O. Johnson and Howard C. endron. Herbert Britain, home office udget section supervisor, has been ansferred to establish a financial ction.

itrogen Division Opens ffice in Raleigh, N.C.

NEW YORK — Nitrogen Division, lied Chemical & Dye Corp., has ened a district sales office in aleigh, N.C. Located at 606 Capital ub Bldg., the new office is under rection of John R. Ritter.

With opening of the new office, Mr. itter was promoted to direct appli-tion materials sales manager for e state of North Carolina. He was rmerly a salesman covering the utheast part of the state.

Joining Allied Chemical in 1940, r. Ritter was a technical service an covering fertilizer manufactur-s in Delaware, Maryland, Virginia d West Virginia before being trans-rred to North Carolina in 1948.

CONSIGNMENT

(Continued from page 1)

stances of the consignment practice wherein the formulator suffered serious setbacks when obliged to extend credit memos for returned goods.

One tradesman voiced the opinion that products of the pesticide trade are becoming commodity items and as such should not be sold on consignment.

Another criticized the lack of selling effort on the part of industry which he said resulted from a shoulder shrugging attitude on the part of the dealer who knows if the material on his shelves is not sold he can just send it back. This gives the dealer no incentive to merchandise and push the products, it was pointed out.

Another impromptu contributor reminded that the industry is relatively young and that it is going through a growing up stage of which the evils of consignment are a part. He foresaw an eventual correction of this practice but admitted that there is seemingly no easy way to bring this about. He said he would like to see every bit of it eliminated.

One observer said that although it is up to the formulators to mend their economic fences, in his opinion the first step should be taken by basic producers. This, he thought, would change the situation all down the line.

This view was challenged by another conventioneer, who declared that the changes must start at the consumer end of the distribution pattern and work back to the basic supplier.

The dealer should not be both banker and supplier to the farmer was the opinion voiced. If the farmer could or would seek sound financing from lending institutions and in that way have cash to pay for the insecticidal products he buys the cash would flow back through the entire distribution line, it was pointed out. No conclusions were reached at the session but the discussion continued informally in the hotel corridors for a considerable time after adjournment.

Anhydrous Output Dips in August

WASHINGTON — August production of synthetic anhydrous ammonia totaled 242,584 short tons, a 2% decline from 248,384 short tons in July, according to the Bureau of the Census.

Output of ammonium nitrate, original solution (100% NH_4NO_3) in August amounted to 174,021 short tons, an 8% gain over 161,546 in July.

August production of nitric acid (100% HNO_3) totaled 188,875 short tons, up 9% from 173,527 in July, while output of phosphoric acid (50% H_3PO_4) amounted to 258,870 short tons in August, a 10% gain over 235,900 in July.

NOW you can formulate high concentrate wettable powders at low cost with MICRO-CEL

SUBSTANTIAL FORMULATION SAVINGS

Micro-Cel*, a new line of synthetic calcium silicates, has extremely high absorptive properties. It is this remarkable capacity for absorption that makes it possible to prepare wettable powders with higher concentrations of dry, viscous or liquid poisons. Micro-Cel's absorption also means that more lower cost diluents can be used. Thus high strength formulation costs are now cut to a new low.

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With Micro-Cel, these high concentrates will remain in a free-flowing state even after prolonged storage. This is particularly important in producing poisons for the export market.

In addition, suspension values after storage of 1.5 to 2.0 I.C.A. have been achieved in 75% DDT wettable powders, based on Micro-Cel. This is more than adequate for storage conditions encountered in most tropical countries.

DEVELOPED BY JOHNS-MANVILLE RESEARCH

Micro-Cel is another development of Johns-Manville Research. Combining high absorption, large surface area, small particle size and excellent dry flowability, it offers a unique combination of properties for insecticide formulation and other process needs.

Sample quantities and carload shipments are now available. Write for further data and sample formulations for poisons of interest to you. Or ask a Celite engineer to help you adapt Micro-Cel to your particular requirements and specifications.

*Micro-Cel® is Johns-Manville's new absorbent-grinding aid designed specifically for the insecticide formulator.

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In Canada: Port Credit, Ontario
Please send ☐ further information; ☐ samples of Micro-Cel. I am interested in using Micro-Cel with the following poisons:

☐ Please have your local representative contact me.

Name_____ Position_____
Company_____
Address_____
City_____ Zone_____ State_____

Paul Ritty

Mark Norris

Dow Assigns Two in New Responsibilities

MIDLAND, MICH.—Dow Chemical Co. has announced the assignment of new duties for Paul Ritty and Mark Norris, field specialists in agricultural chemical development. The area involved extends from Florida to Colorado.

Mr. Ritty, based in Fern Park, Fla., works on vegetation and plant growth control projects in Florida, Georgia, and North and South Carolina. He will be ready to assist upon request in research and development studies at state colleges, experiment stations, the U.S. Department of Agriculture and other organizations.

Mr. Norris, operating from Dow's agricultural research center at Lake Jackson, Texas, deals primarily with projects on veterinary chemicals and animal nutrition.

Mr. Ritty received his A.B. degree from St. Mary's in Cleveland, Ohio, B.S. from St. Louis University and M.S. from Kent State University, Ohio. He was in charge of field research, agricultural chemicals, for the B. F. Goodrich Co. for the past five years.

Mr. Norris holds a B.S. from New Mexico A&M College and an M.S. from Kansas State College.

National Aerial Applicators Conference Set for St. Louis

ST. LOUIS—The annual Aerial Applicators Conference of National Aviation Trades Assn. will be held Nov. 1-3 at the Chase Hotel in St. Louis, Mo.

John Neace of Marsh Aviation, Inc., Phoenix, who heads the agricultural activities division of NATA, is planning fewer subjects this year but said the program will devote more time to matters of major policy and over-all industry concern.

Conference agenda will include a review of an "Air Agency" idea being developed by CAA designed to raise the level of aerial operations and remove some of the current pitfalls in this work.

Top representatives of U.S. Department of Agriculture will conduct a round table with industry representatives on improvement of contracts and contract operations. This will be headed by Dr. W. L. Popham, Agricultural Research Service, Washington.

The group will also hear from Roy Allgyer, research coordinator of USDA's ARS, who will review "Aviation Research within USDA."

"Safety with Phosphate Insecticides" will be presented by Dr. C. Boyd Shaffer, central medical department of the American Cyanamid Co.

A review of cost accounting practices, maintenance matters, the approval of a national air applicators' survey and sessions on marketing, together with establishment of the association's position on a number of matters in the field of aerial dusting and spraying will round out the NATA conferences.

Fumigation Pays

CLEMSON, S.C.—Soil fumigation before planting tomatoes is recommended by Dr. J. M. Eleazer of Clemson Extension Service, who cites the case of O. R. Bishop, a farmer of Frogmore. Mr. Bishop increased his yield over 100 bu. per acre by soil fumigation before planting.

Nematode Moves Into Oregon Sugar Beet Growing Area

PORTLAND, ORE.—Oregon St... College and the Oregon State Depa... ment of Agriculture report that ... sugar beet nematode has been fou... in the Ontario area, one of the f... remaining sugar beet producing be... of the nation that had remained f... of the pest.

The nematode infestation was d... covered in a 15-acre field midway b... tween Ontario and Nyssa by Haro... J. Jensen, OSC nematologist, and ... B. Loring, Oregon Department ... Agriculture plant pathologist. Full e... tent of the spread has not yet be... determined, but a full-scale investig... tion is now underway by Malhe... County extension agents and fiel... men for the Amalgamated Sugar C... Nyssa.

An emergency meeting of all fiel... men was called immediately follow... ing the discovery and officials fro... the company's headquarters in Ut... were flown in to map a control pr... gram. The sugar company contrac... some 45,000 acres of beets annual... in the Oregon-Idaho area near O... tario.

The OSC nematologist says th... company has promised prompt actio... in initiating control programs again... the pest.

The nematode severely stunts bee... by feeding on roots and the beet i... self. Beet yields in infested areas se... dom exceed 15 tons per acre com... pared to 25 and 30-ton yields in th... Ontario area that has been rated on... of the best in the country.

Best Appoints New Assistant Plant Manager

OAKLAND, CAL.—The Best Ferti... lizer Co., Oakland, has announced th... appointment of Taylor Darden a... assistant plant manager of the com... pany's plant at Lathrop, Cal. Mr... Darden has already assumed his re... sponsibilities and is making his hom... in Tracy, according to Lowell W... Berry, president of the firm.

Formerly, Mr. Darden was resident... manager of Central Farmers Ferti... lizers in Idaho and was with West... vaco Chemical division of Food Ma... chinery Corp. During World War I... he served as a Lieutenant Colonel i... the army.

He is a native of Virginia and wa... graduated from Virginia Polytechni... Institute in 1932 with a B.S. degre... in chemical engineering.

Best Fertilizers products are dis... tributed throughout California wit... some movement in Oregon, Nevada... Arizona and into the export markets... Production is at the company plant a... Lathrop, Cal.

Iowa Fertilizer Short Course Planned

AMES, IOWA—Iowa State Colleg... will present the ninth annual Ferti... lizer Dealer's Short Course at Ame... Nov. 8, according to J. A. Stritze... agronomy department, program... chairman.

A full day of sessions is planned... The program will open at 9:30 a.m... and continue through an evenin... question and answer session.

Topics to be discussed will rang... from "What Motivates a Farmer t... Use Fertilizer" to "The Role of Fer... tilizer in Wise Land Use." Mr. Strit... zel said that topics dealing with ferti... lizer use under drouth conditions an... in the soil bank, will be included.

Iowa State College specialists wi... play a major role in the program.

TEXAS CONFERENCE

COLLEGE STATION, TEXAS—... The Texas Fertilizer Conference ha... been scheduled for Jan. 8-9 at Texa... A&M here.

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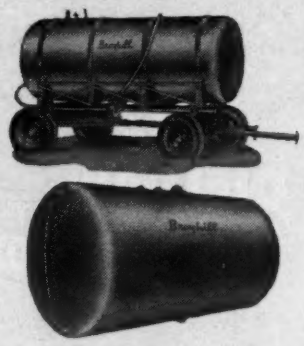

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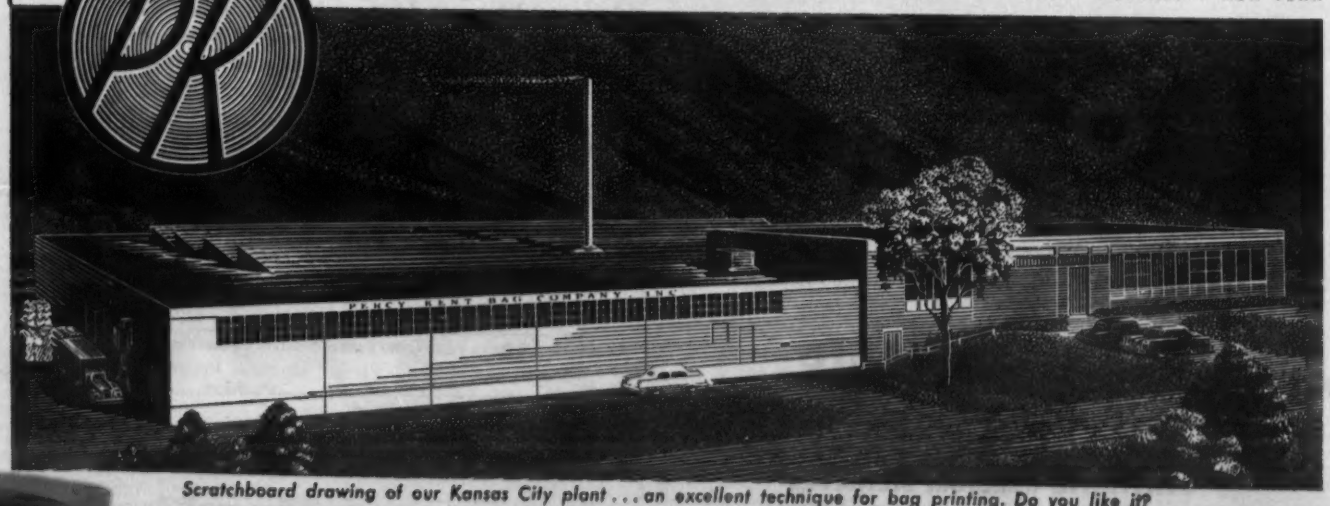

Scratchboard drawing of our Kansas City plant . . . an excellent technique for bag printing. Do you like it?

Charles D. Sampson

VULCAN APPOINTMENT—Charles D. Sampson, 399 Elberon Ave., Cincinnati, has been appointed sales representative in a four-state area for Vulcan Containers Inc., Bellwood, Ill., manufacturer of steel shipping containers and tin cans, it has been announced by Herbert B. Scharbach, vice president of sales. Mr. Sampson's sales area will include Cincinnati, Dayton and all of southern Ohio. In addition he will cover southeastern Indiana, northern Kentucky and northern West Virginia. Mr. Sampson is a chemistry graduate of the University of Cincinnati.

Monsanto Promotes Three in Research

ST. LOUIS—Monsanto Chemical Co. has announced three promotions in the research department of its Organic Chemicals Division.

Dr. Phillip C. Hamm of St. Louis, project leader in herbicidal research, has been appointed to the position of scientist to continue his activity in the general field of plant physiology including studies on herbicidal activity.

James F. Adams and Dr. C. William Roos of St. Louis, project leaders in the research department's chemical engineering section, have been promoted to group leaders in charge of engineering and economic evaluations and engineering research, respectively.

Dr. Hamm joined Monsanto at Seattle, Wash., in 1944 as a research associate with the company's former western division. He left the company in 1948 to do graduate study and rejoined it in 1951 as a project specialist in agricultural chemical development. He transferred to agricultural research as a plant physiologist in 1952. A native of St. Paul, Minn., he attended the University of Minnesota, receiving a B.S. degree in forestry (1938) and a Ph.D. degree in plant physiology (1950).

South Carolina Safety Session Set

COLUMBIA, S.C.—South Carolina's 19th annual accident prevention conference here will include a section for the fertilizer industry. Sessions are scheduled at 10 a.m. and 2:30 p.m. at the Jefferson Hotel Nov. 9.

Presiding will be Ervin U. Campbell, plant manager, Anderson (S.C.) Fertilizer Co. Speakers will be V. S. Gornto, manager, insurance department, Smith-Douglass Co., Norfolk, Va.; Melvin C. Clements, maintenance engineer, Virginia-Carolina Chemical Corp., Charleston; Alton L. Foster, superintendent, International Minerals and Chemical Corp., Spartanburg; Thomas M. Bloom, superintendent, Davison Chemical Co., Charleston, and P. W. Logan, division manager, loss prevention department, Liberty Mutual Insurance Co., Atlanta.

Many Drouth-Stricken Southwest Farmers Faced with Bankruptcy

AUSTIN, TEXAS—The long drouth in the Southwest has reached such an intensity that thousands of farmers and ranchers are faced with bankruptcy. Already many have left the farms for salaried jobs in the cities.

The drouth extends throughout the Southwest. Stream flow is down so much that practically no irrigation is being done. In the lower Rio Grande farmers are trying to get enough water to keep the citrus trees alive.

Winter small grain has not been planted in most areas; pasture grasses are gone, and rather than buy feed all winter long, ranchers are selling even their breeding herds.

The drouth dates back to 1947 when the first dry year came along. There has been some rain since then, but the situation has gradually worsened.

This is probably the most critical time farmers ever faced, according to G. G. Gibson of the Texas Extension Service. He listed the problems as lack of stock water, barren pastures, short crops and lack of moisture to germinate seed.

The situation is just as bad in most of New Mexico and Arizona. Outside the narrow river valleys, very little grows, and even the river water is in short supply.

The only bright spot in the whole desolate area is the irrigated section of West Texas, where farmers irrigate from wells. Cotton is making greater yields than ever, and grain sorghums are also producing heavily. In a few spots a lowered water reduced yields, but generally the irrigated areas are in good condition.

Most farmers increased yields by using more fertilizer and practicing a rigid insect control program.

Shell Chemical Introduces Movie On "The Rival World"

NEW YORK—"The Rival World," a color movie that has won awards at five international film festivals, has been introduced by Shell Chemical Corp. at special previews for agricultural and health agencies and the press.

The film shows how the inhabitants of the rival world bring death to half of the men who die and destroy one-third of all the food man grows. The inhabitants—the film's chief actors—are insects.

The picture tells how science is meeting this threat and shows some of the methods used in fighting enemy insects. There are startling close-ups of insects feeding, destroying and being destroyed.

The film follows the world-wide insect attack against man and his food, from the malaria-infested areas of Africa to the fruit orchards of Europe, from the wheatlands of the West to the tea gardens of the East. It shows man's counter-attack waged on a scale of a world war.

"The Rival World," produced by Shell, has won awards at film festivals in Italy, Holland, Scotland, Ireland and Uruguay. It's in 16MM, color and sound and has a running time of 27 minutes.

The picture will be made available, free of charge, for showings by clubs and other organizations by Nov. 15. Prints may be obtained by writing to Shell Oil Co., 50 W. 50th St., New York 20, N.Y.

SOUTH CAROLINA LIME USE

COLUMBIA, S.C.—South Carolina farmers applied 101,907 tons of agricultural limestone to their soil last year, a decrease from the 135,642 applied in 1954 and far below the 1,680,000 tons the National Agricultural Limestone Institute says is needed.

NEW GRANULE

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(HIGH DENSITY)

CSC AMMONIUM NITRATE

SPREADS EVENLY

These low-moisture granules always flow freely, spread evenly, and stay put after spreading. When you use nitrogen to maintain top yield per acre, CSC Ammonium Nitrate is an excellent source. A minimum of 33.5% nitrogen is guaranteed — half is nitrate nitrogen for rapid early growth, and half is ammonia nitrogen for steady, continued growth.

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photograph of *new granule* CSC Ammonium Nitrate shows the exclusive, controlled particle size. Granules are specially coated to prevent lumping or caking. Your hopper holds more nitrogen with *new* high density granules. Storage is guaranteed under normal conditions for one year. Sturdy, easy-to-handle, 6-ply bag keeps granules ready to flow freely.

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NITROGEN the Heart of the Harvest

WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

Chinese Mission

An agricultural science study mission from Red China is now studying Indian production methods. Chin Chao Yen, leader of the group, says the object of the delegation is to make an on-the-spot study of methods adopted by India for the improvement of agriculture and to assess the results obtained. The party has been split into three divisions, one to study cereal crops, the second to look into the commercial crop production and the third to examine livestock rearing.

The first two groups propose to pay particular attention to the efforts of the Indian government to persuade farmers to increase fertilizer usage in order to increase home output.

Rival World

Astonishing, and at the same time, frightening is the story behind Shell Chemical's new movie, The Rival World. It's the story of the never-ending war between man and insect and the story points up the way that man, through his ingenuity, is succeeding in holding the line against attack, even if he cannot hope to win the battle. It is a war of containment in which the chief weapons are insecticides.

If it were not for the weapons now being made available by the scientists and produced by the chemical industry, man's rival world could overwhelm him, the film graphically asserts. In every square mile of land live as many inhabitants of the rival world as there are men on the earth —two billion.

The insect world's powers of reproduction are such that in 10 generations—and generations are short in that world—a single greenfly can give birth to young outweighing the population of China. Insects cause one half of all human deaths and they steal one third of all the food man grows.

CIL Absorbs Stone

Canadian Industries, Ltd., leading Canadian chemical and fertilizer producer, has acquired the firm of William Stone & Sons, Ltd., Ingersoll, Ont. Established more than 80 years ago, the Stone company has served the southwestern portion of Ontario to build up an extensive business. In addition to fertilizers, the firm ha dles feed and hides. There are a extensive rendering operations.

New president of the company V. B. Lillie, general manager of CI agricultural chemical division. In a nouncing the purchase, Mr. Lillie s that there will be no change in t name of the company or in its ge eral policy. Fertilizer and feed co centrates will continue to be offer under the Stone brand name and t sales and operating departments the company will remain unchanged

Retiring as president of Willia Stone & Sons, Ltd., is F. H. Sto Also retiring are A. R. Izzard, vi president; L. H. Westcott, secretar treasurer, and R. A. Stone, gener manager. All were members of t board of directors.

Indian Factory

One of India's three new fertiliz factories is expected to be in produ tion by 1960, according to K. Reddy, minister of production in t Indian government.

The factory is located at Nanga and expected capacity is 200,00 tons of ammonium nitrate a year Two other projects for factorie are in the planning stage.

Mr. Reddy revealed that the go ernment is now giving considerati to a plan to set up two further fert lizer producing units, but, he says, firm decision has been made ye Work on extending the Sindri fert lizer factory is proceeding rapid and the output has already bee stepped-up.

Placement, Equipment Problems on Program Of Chicago Meeting

CHICAGO — The Power and M chinery Section of the America Society of Agricultural Engineers, cooperation with the National Joi Committee on Fertilizer Applicatio has scheduled a meeting at t Edgewater Beach Hotel here Dec. 1

C. E. Guelle, vice chairman, N tional Joint Committee on Fertiliz Application, will preside. The mo ning program, beginning at 9:30 a.m will include:

"Soils and Plant Nutrition Pro lems," Firman E. Bear, editor-i chief, Soil Science, Rutgers Unive sity; "Engineering Problems," H. Walker, professor emeritus, depar ment of agricultural engineerin .University of California, and "M chinery for Fertilizer Placement W. C. Hulburt, U.S. Department Agriculture.

L. N. Wise and T. N. Jones, Mi sissippi State College, will get t afternoon session under way with discussion of "Fertilizer Placeme for Grain Seedings in Permane Sods."

Following will be: "Trends in t Use of Liquid Fertilizers," William Bone, Monsanto Chemical Co.; "D velopments in the Application Liquid Fertilizers," H. F. Miller a C. W. Gantt, USDA, and "Phosphor Solubility, Particle Size and Plac ment as Related to the Uptake Fertilizer Phosphorus and Cr Yields," R. L. Cook, Kirk Lawto L. S. Robertson and C. M. Hanse Michigan State University.

Members of the fertilizer indust and agronomists are invited to a tend the meeting.

Wheat Acreage Reserve

WASHINGTON — Wheat farme signed 106,485 agreements placi 4,335,555 acres under the 1957 win wheat acreage reserve program the soil bank through Sept. 28, 19 the U.S. Department of Agricult has announced. This compares w 79,985 agreements, covering 2,997,0 acres, signed through the previo week ending Sept. 21.

Watch For These 3 Hard-Selling Phillips 66 Ads...

TO HELP YOU GET MORE FALL BUSINESS!

Good pasture management calls for balanced fertilization—including phosphate, potash and other minerals, in addition to nitrogen.

S-T-R-E-T-C-H GREEN FEED

Apply Phillips 66 Ammonium Nitrate on pastures this fall for increased beef and milk gains at lower cost:

Following good pasture management practices, apply Phillips 66 Ammonium Nitrate on your permanent pastures this fall. You'll get extra weeks of grazing this fall and next spring. Grasses will be richer in protein, more succulent and palatable.

Your biggest reward will be faster and bigger beef and milk gains at a lower production cost per pound—because grass forage is your cheapest source of feed.

If your soil tests show that your pastures need fertilizing, see your fertilizer dealer right away. For the nitrogen you'll need for lush, protein-rich grazing, be sure to specify Phillips 66 Ammonium Nitrate, the 33½% nitrogen fertilizer.

Benefits of nitrogen on fall-seeded grains:

- Higher yields, for increased profit per acre.
- Extra weeks of pasture, fall and spring.
- Richer protein forage, better hay.

Good pasture management calls for balanced fertilization—including phosphate, potash and other minerals, in addition to nitrogen.

"BONUS" GRAZING

How fall application of Phillips 66 Ammonium Nitrate can stretch small grain pasture for extra profit:

There's a big bonus in applying nitrogen in the fall to your small grains. The young plants will respond with hardy and vigorous growth, so that you can pasture your animals earlier and longer.

This helps to cut dry feed bills. And, because the nitrogen increases the protein content in the plants, you will get faster and bigger beef and milk gains—at a lower production cost per pound.

The increase in profit from your harvested grains

big reason for applying nitrogen in the fall. But it will also pay you to think about the "bonus" grazing you can get by putting down plenty of nitrogen on your fall-seeded grains.

If soil tests show that your small grain land needs fertilizer, see your fertilizer dealer right away. Tell him the nitrogen you need for extra profit per acre. Then, be sure to specify Phillips 66 Ammonium Nitrate, the 33½% nitrogen fertilizer.

Benefits of nitrogen fall-applied on pastures:

- Increased protein in grass for early grazing.
- Extra weeks of grazing, fall and spring.
- Bigger, faster gains of less cost per pound.
- Nitrogen carry-over for crops to follow.

Get crop dividends next year—plow down Phillips 66 Ammonium Nitrate this fall:

Here's why plow down of Phillips 66 Ammonium Nitrate this fall can be one of the most profitable investments in your business of growing:

First, you'll get extra nutrients in spring by plowing in nitrogen. Early crop residues, when plowed under, release nitrogen into plant beneficial microbes. These also store residues that "tie up" nitrogen. This also change in your soil. Your fall plow down, be sure to specify Phillips 66 Ammonium Nitrate, the 33½% nitrogen fertilizer.

then can draw on the subsoil moisture, making crops more resistant to temporary drought.

Another big benefit: by plowing down nitrogen in the fall, you get this important job out of the way before the big spring work load sets in.

So, bank nitrogen this fall for more profit per acre next year. See your fertilizer dealer right away for all your fertilizer needs, and for the nitrogen you require for fall plow down, be sure to specify Phillips 66 Ammonium Nitrate, the 33½% nitrogen fertilizer.

AUG. SEPT. OCT.

PHILLIPS 66 FALL ADVERTISING WILL REACH 4,625,000 FARM READERS

Fall business is plus business—and Phillips *66* is out to help you get more of this end-of-the-year profit. Convincing ads like these demonstrate to your best prospects that they can profit by fall application of fertilizer.

Look for the message in these ads that sells balanced fertilization—and mixed fertilizers. Another Phillips *66* extra to make your selling job more profitable.

A companion high nitrogen fertilizer for your quality mixed goods.

PHILLIPS CHEMICAL COMPANY
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HOUSTON, TEX.—*1020 E. Holcombe Blvd.*
INDIANAPOLIS, IND.—*1112 N. Pennsylvania St.*
KANSAS CITY, MO.—*500 West 39th St.*
MINNEAPOLIS, MINN.—*212 Sixth St. South*
NEW YORK, N. Y.—*80 Broadway*
OMAHA, NEB.—*6th Floor, WOW Building*
PASADENA, CALIF.—*330 Security Bldg.*
RALEIGH, N. C.—*804 St. Mary's St.*
SALT LAKE CITY, UTAH—*68 South Main*
SPOKANE, WASH.—*521 E. Sprague*
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Richer Fields for Dealers

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

$30,000 IN ADDED BUSINESS

Wisconsin Retailer Gets Results From Major Pesticide Promotional Program

By AL P. NELSON
Croplife Special Writer

What happens when a farm supply firm puts real promotional effort behind farm chemicals?

The result from Mapleton (Wis.) Feed & Hardware, operated by T. A. Torgerson and Erling Torgerson, brothers, was about $30,000 additional business the first eight months of 1956 on farm chemicals, exclusive of the sale of fertilizer.

Previous to 1956, the Torgersons, busy with a big feed mill operation in town of only 99 population, had only a small stock of insecticides and land sprayers. But, realizing the tremendous growth of the farm chemical industry and the demand for the products, the Torgersons went all out this year in a contact, an advertising, a display and service program. And they got results, and expect to do much better next year.

The first step was to hire an experienced field man who could go out and talk about spraying problems with farmers and sell them the materials. The second was to stock and sell power spray equipment. The third was to get a number of custom operators in the area who would be willing to do the work part time seasonally.

Erling Torgerson reports that early in spring his company staged a large meeting for farmers in a township hall in the area. All farmers in the region were invited to come to hear the farm chemical story, to see color slides and films and hear company representatives, the county agent and others talk about weed and insect control. Door prizes and coffee and doughnuts helped to swell the crowd for this important meeting.

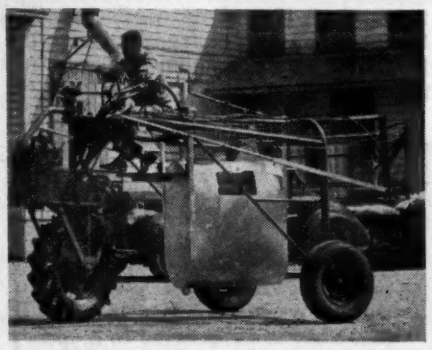
"This meeting certainly aroused a lot of enthusiasm," states Mr. Torgerson. "Many farmers asked questions following the talks and movies and color slides, and the stage was then set for us to start selling chemicals."

Kenneth L. Jensen, the fieldman, followed up on this meeting, calling on farmers and discussing their spray programs with them. He worked out spray schedules with them. He next sold a power sprayer to a farmer who had the time to go out and handle spray jobs on the side. This farmer was soon so busy that he had to employ another hired man on his farm to help handle chores.

Working throughout the entire trade area Mr. Jensen and the Torgersons were able to sell five sprayers during the season. The owners of these spray machines found them very useful for corn spraying and equally efficient on low level spraying. Some of the buyers were newly launched custom sprayers and others were large farmers who had acreage sufficent for the spray investment.

The Torgersons also took a line of sprayers which can be operated off a tractor. These are used with 10, 20, 30 and sometimes 40 ft. booms by some customers. One canning company which prefers wet sprays from a tractor unit to airplane spraying, uses a 40 ft. boom regularly during the season.

"Because of our extensive work with farmers in the spray program, we have also taken on a line of corn toppers," states T. A. Torgerson. "These toppers cut off the tops of the corn allowing the ears on the corn to mature quicker, and the growers of sweet corn in this area like that, for it enables them to mature all of their crop in a doubtful season."



AT WISCONSIN FIRM—Sales of power sprayers, such as illustrated above, to farmers for custom work and to farmers who want to do their own spraying have boosted income from farm chemicals for Mapleton (Wis.) Feed & Hardware. This is one of the factors that has made a major farm chemical promotional program pay off for the firm.

Most of the chemical which the Mapleton Feed & Hardware has sold this year has been 2,4-D and Dalapon. In sweet corn areas farmers have been using two nozzles to the row in spraying for ear worm, the Torgersons report.

Martin Pankow, a farmer to whom the Torgersons sold a power sprayer and who does custom spraying during the spring and summer, reports that he charges $1.50 per acre for spraying where a job is less than 10 acres. If a farmer has more than 20 acres the charge drops to $1 per acre.

Mr. Pankow figures that he has sprayed over 1,000 acres during the first year he has owned his sprayer. For weed spraying, he says that he finds that about 7 gallons per acre does the job. In addition to the per acre spraying fee, the farmer, of course, pays extra for the chemicals used.

The experience of the Torgersons during their first year in the farm chemical business on such a large scale is that the average farmer

(Continued on page 12)

SHOP TALK OVER THE COUNTER FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

A favorite topic when dealers get together is farm calls and whether they produce new customers and sell more merchandise. Dealers hold a variety of opinions, with the result that there is a general lack of agreement on the profitableness of route selling.

However, I have heard one merchandising authority in the farm supply field claim that he has never known a dealer with a regular, established route system become a failure.

No doubt there are many dealers without a farm visiting program who favor the idea but just don't take the time to establish one.

Further, it is pretty well established that a hit-and-miss system—the one-call-a-year type—is not profitable. A gardener needs to cultivate his garden more than once a year to kill all the weeds and aerate the soil properly. In many lines of selling it takes five calls or more to get the order. Usually it takes more than one call to "warm" up a prospect, get his interest and make a sale.

The farm supply dealer can make at least five calls a year on a farmer, and have new items to offer each time, in addition to trying for a fertilizer order.

And the dealer need not write off any farmer as a poor prospect, unless it be for credit reasons.

The Dealer's First Visit

On the first visit, the dealer may visit a farmer to whom he has never sold anything before. In such a case he hands the farmer a small gift—a ruler, a record book, matches, a pencil or calendar. He gets acquainted, learns where the farmer buys his fertilizer, insecticides, seed, feed and if he is satisfied with results he gets from the products.

Give the new farmer a little gift and he'll usually listen to you that long. And in the meantime, you can keep your eyes open. Does the farmer need barn equipment, sprays, more water for the premises, poultry or animal remedies, utensils for his milk house? Or poultry house and barn ventilators, stanchions and other items which you handle? Remember all these things. Later you'll want to jot them down in a notebook in your truck.

Suppose you can't get to first base on fertilizer with him now, because he already is satisfied with his source of supply. Are you going to write him off your list?

By no means. This is the time to suggest one more item, let us say, a

(Continued on page 12)

By RAYMOND ROSSON
County Agent, Washington County, Tenn.

Do you ever play supposing? Suppose all farmers went on a 40 hour work week, instead of their usual 60 hour week, and suppose agricultural research had not furnished them the "know how," and suppose industry had not furnished them tractors, drills, harrows, etc., and industry did not furnish them gas and oil for the tractors and . . .

Suppose industry could not furnish the necessary plant foods, and suppose yields were the same as 25 years ago, when wheat was 10 bu. per acre instead of 25 bu., and corn was 25 bu., instead of 60 bu., now, and tobacco was 900 lb., instead of 1,900 now, and the milk cows gave 3,000 lb. of milk instead of 5,000 to 10,000 lb.

If farmers had not made these changes, with the help of research and industry, what would it cost the industrial worker and the average city dweller to provide a well balanced table?

As a matter of fact, we just wouldn't have enough food to go around, and we could not import, because our overseas neighbors didn't have enough for themselves.

Suppose our consumer goods inventory ran the same risk as tobacco plants do, against flee bugs, wild fire, blue mold . . . and the old milk cow can come down with bloat as well as bangs. There are dozens of things to attack the poultryman, from baby chicks to the laying hen . . . the strawberry grower just can't put a roof over his berries to ward off frost, corn has the borer, alfalfa the aphid and the bean the beetle . . .

This little game of supposing now and then: causes us to think . . . Don't you think?

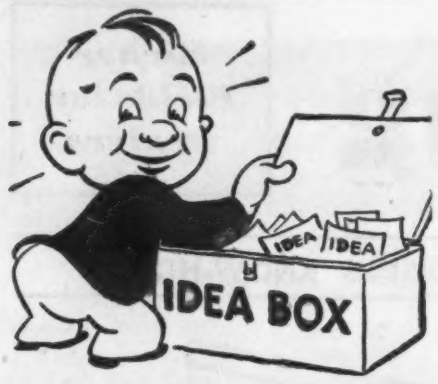
Spotted Alfalfa Aphid Found in Minnesota

ST. PAUL—The spotted alfalfa aphid was found for the first time in Minnesota late in September, T. L. Aamodt, state entomologist, has reported.

The aphid is present in very small numbers in the southwestern part of the state at the present time. No injury to alfalfa is expected to occur this year. There is reason to believe that the aphids now present will be unable to survive Minnesota winters. In 1957, however, it is entirely possible that infestations may originate from more southerly states and build up in the state in sufficient quantities to be a problem, Mr. Aamodt said.

OPENS NEW STORE

PAULLINA, IOWA — The Holtgrewe Feed & Sales Co. recently was opened in the Watts Bldg. here.



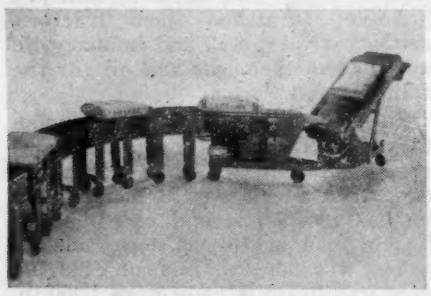
What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 5553—Car Loader

Officials of the R. T. Sheehan Co. have announced new additions to the firm's system of one-man push button loading of boxcars and trucks. The firm's Stacker Car swings manually 180° off from the end of the Flex-Bend (see picture) and raises, lowers, moves forward and reverse with push buttons. The operator guides the Stacker Boom to the spot



where he wants to place the bag. The Stacker Boom has an 18 in. wide belt and comes in two lengths, 6 ft. and 8 ft. It raises to a height of 84 in. and lowers to 18 in. from the floor. The speed of the Flex-Bend and Stacker Boom is set to handle twenty 100-lb. bags per minute with one man operation. The car loader is made up of four component parts, stacker car, belt drive car, power traveler car and center cars. Center cars are added to give the overall length. Secure more complete details by checking No. 5553 on the coupon and mailing it.

No. 5552—Boilers

A new folder describing the Nebraska Water Tube Boilers has been released by the Nebraska Boiler Co., Inc. The folder describes the features of steam generation, heat transfer, combustion, firing equipment and controls, performance and accessibility. A detailed chart showing ratings and data of the various models of N-B boilers also is included. For a copy of this booklet, please check No. 5552 on the coupon and mail it to Feedstuffs.

No. 6489—Soil Sterilant Brochure

An 8-page, illustrated brochure, which describes how soil fumigation increases yields of many crops has been published by Stauffer Chemical Co. The new publication claims that malnutrition and drouth have often been blamed for crop failures whereas root and seed-attacking fungi and nematodes were the real culprits. The brochure outlines methods of fumigating the soil by applying Stauffer's temporary soil sterilant, Vapam. Various application methods such as a sprinkling can, hose proportioner, sprinkler, deep injection, shallow injection, plow sole application, flood irrigation or sprayer may be used. The fumigant is said to kill all soil pests, including fungi, nematodes, weeds and weed seeds, and then evaporate as a harmless gas. It has been used in treating both seed beds and fields in all U.S. climates. Secure the brochure without charge by checking No. 6489 on the coupon and mailing it to Croplife.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6482—Garden Chemicals Folder

A new folder on garden chemicals has been published by E. I. du Pont de Nemours & Co. "Chemicals are garden tools as necessary as hoes and rakes," according to the folder. Such products as fruit tree spray, dormant spray oil, rose spray-duster, rose insecticide and fungicide, garden insect sprayers, floral dust, tomato dust, vegetable garden dust and a variety of chemicals for weed control in lawns and gardens are described in the folder. A number of illustrations of insects and plant and vegetable diseases, as well as of product containers, are shown. Check No. 6482 on the coupon, clip and mail it to Croplife to secure the folder.

No. 6483—Wood Preservative

A new folder on the wood preservative called by the trade name Carbolineum, has been prepared by the Carbolineum Wood Preserving Co. The folder claims that the product doubles the life of wood, stops termites easily and surely and stains wood a nut brown color. It adds that one application a year on poultry houses kills and keeps out chicken mites, blue bugs and fowl ticks. The product is recommended for posts, barns, cribs, poultry houses, cabins and cottages. Covering capacities are included in the folder. The folder may be secured without charge by checking No. 6483 on the coupon and mailing it to this publication.

No. 6484—Tractor-Shovels

Two new four-wheel drive, pneumatic-tired tractor-shovels have been announced by the Frank G. Hough Co. Part of the "Payloader" line, the model HH has a payload capacity of 1¾ cu. yd. and the model HU a capacity of 1⅛ cu. yd. The necessity of coming to a stop for a range shift is eliminated with a new "no stop" transmission. All shifts in both forward and reverse can be made without slowing down. Power steering and power brakes are provided. Complete specifications and literature on both models are available without charge. Check No. 6484 on the coupon and drop it in the mail.

No. 6485—Soil Sterilant

A four-page, well illustrated brochure, which describes a one-application method of ridding soils of weeds, weed seeds, fungi and nematodes, has been published by Stauffer Chemical Co. The publication places main emphasis on the treatment of tobacco plant beds. It states that fall treatment with Vapam, the temporary soil sterilant developed by Stauffer chemists and agronomists, permits spring seeding at the earliest possible date and eliminates the labor expense of weeding. The brochure outlines basic, easy-to-follow procedures to be employed in taking advantage of the product to eradicate all types of soil pests. Copies of the brochure are available, without charge, by checking No. 6485 on the coupon and mailing it to this publication.

No. 5535—Steel Tank Brochure

A 16-page color brochure on bolted steel tanks has been issued by the Columbian Steel Tank Co. Described on the cover as "catalog No. 656," the brochure shows pictorially the tanks manufactured by the company for a large variety of purposes. Some of the uses include grain storage, water supply, the storage of dehydrated alfalfa under inert gas pressure and various liquids. Improvements in tank construction by the use of new synthetic gasket materials is pictorially described in a two-page section and one section includes a partial table of the American Petroleum Institute's dimensional specifications for bolted steel tanks from 100 bbl. to 10,000 bbl. capacity. Copies of the brochure are available free. Check No. 5535 on the coupon and mail it to this publication.

No. 6477—Fertilizer Hose

A new hose has been developed by Hewitt-Robins, Inc., to dispense liquid fertilizer from farm storage tanks. The hose is made with a synthetic rubber lining claimed to be resistant to ammonia nitrate solutions and petroleum products. The outer covering is green neoprene resistant to sunlight and oxidation. The hose is available in ¾-in. and one-in. diameters. Secure more complete details by checking No. 6477 on the coupon and mailing it to Croplife.

No. 6473—Seed Treating Unit

A new type of product called the liquid Adaptor is being marketed by Parsons Chemical Works. The product is used for converting the dust type automatic seed treaters to a liquid treatment process. It is all plastic and is claimed to be safe to use on any corrosive seeding treating chemicals such as various liquid mercury types. It is said to meet the specifications in those states where laws require dyed treated grain. A specification sheet which includes sectional drawings of the unit is available without charge. Check No. 6473 on the coupon and mail it to this publication.

No. 6480—Strawberry Weeds

Strawberry weed prevention with CRAG Herbicide-1 is described in a new strawberry folder released by Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp. Company officials in announcing folder, state: "Growers and agricultural experiment stations report

(Continued on page 14)

Send me information on the items marked:

☐ No. 5535—Tank Brochure	☐ No. 6479—Tanks
☐ No. 5552—Boilers	☐ No. 6480—Herbicide
☐ No. 5553—Car loader	☐ No. 6481—Insecticides
☐ No. 6473—Seed Treating	☐ No. 6482—Garden Chemicals
☐ No. 6475—Film	☐ No. 6483—Wood Preservative
☐ No. 6476—Soil Handbook	☐ No. 6484—Tractor Shovel
☐ No. 6477—Fertilizer Hose	☐ No. 6485—Soil Sterilant
☐ No. 6478—Feeder, Seeder	☐ No. 6489—Brochure

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

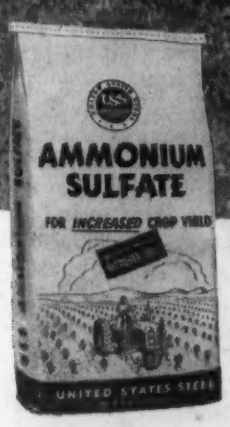
Reader Service Dept. Minneapolis 1, Minn.

SELL
USS Ammonium Sulfate for fall pasture profits!

Small grain and grass pastures can still produce some fine grazing this fall . . . if they have enough *nitrogen*. Now's the time to explain to your customers that their pastures need an application of USS Ammonium Sulfate. The nitrogen in ammonium sulfate will promote a fast recovery of grazed over pastures and add several weeks to the fall pasture season. The growth will have a higher protein content, too. These two facts mean that your customers can get *extra* profits from their pastures . . . with the help of nitrogen-bearing USS Ammonium Sulfate.

Boost Fall Business

A top-dress of 200 to 300 pounds of USS Ammonium Sulfate on each acre of pasture can be a real benefit to your customers *and to you.* Make sure you get your share of the fall business. Order a supply of USS Ammonium Sulfate in bulk or bag from your mixer today.



USS Ammonium Sulfate

USS

6-2472

UNITED STATES STEEL

WISCONSIN DEALER

(Continued from page 9)

would rather hire his spraying done than buy a sprayer for his own use. One reason for this is that there is a shortage of skilled farm help. If the farmer buys his own sprayer, he must use his own time or that of an expensive hired man to operate the sprayer, so he figures he is just as well off to hire this seasonal job done.

Therefore, report the Torgersons, the best setup seems to be to encourage the setting up of regional custom sprayers, who can do this work part time every year, with the Torgersons helping such custom operators to sell the farmer on the spray jobs. The custom operators, too, need extra jobs for fall and winter; thus the ideal man for such a job is a well qualified farmer who can fit custom spraying into his own farm program. With the profit made from his spraying operations, Martin Pankow figures that he has paid for his machine in one season.

Mr. Pankow also reports that before he starts a spray job he makes arrangements with the farmer on pay for the job. To date he has hardly any credit losses on his operation, he states. Farmers seem to be willing to pay cash for such an important job as spraying.

The Torgersons have also sold a lot of barn fogging outfits to dairy farmers this past year. These outfits are on display in the large Torgerson store. The fogging outfits are ideal for killing flies. If a farmer has a compressor (air) which he can hook up to a fogger, he can get the outfit for $13.95. However, if he must buy an air compressor, his cost will go up at least another $50.

"We feel that we have just begun to scratch the surface in the farm chemical market in this area," declares Erling Torgerson. "As one farmer sees what another has accomplished through use of weed sprays, ear corn sprays, control of quack, grasshopper, etc., he is certainly going to work spraying into his farm program eventually. We already have a number of new farmers lined up for spraying schedules for 1957."

The Torgersons say that throughout the winter and spring they will have other educational meetings on farm chemicals. Farmers are eager to learn more about spraying programs, and this is the time to get this information to them, they say.

Both the Torgersons say that the firm spends about 2% on advertising. They are using about 90% of their budget on newspaper copy. Since tiny Mapleton has no newspaper, the Torgersons advertise in the Oconomowoc Enterprise, The Oconomowoc Shopper and the Lake County Reporter, Hartland, Wis. These newspapers are weekly publications within a distance of 10 miles and have fine rural circulation.

The Torgersons like to take sizable newspaper space in each ad and quite frequently they show local interest photos in their ads. Newspapers take such pictures for them at a low cost. The Torgersons have published pictures of their mill and store in various ads. They have also shown pictures of spray equipment outfits and operators. They also showed one picture of Ken Jensen, the fieldman who helped push the farm chemical program along.

"We like to show pictures that will stop the reader," says T. A. Torgerson, "and we feel that the small extra expense is worthwhile."

One ad last spring announcing the farm chemical program, showed a picture of Mr. Jensen, with copy stating, "STOP . . . Weeds and pests . . . For big yields and better crops make Mapleton your chemical farming headquarters. We are now prepared to serve you, not only with the material and equipment, but with the help and guidance often needed for a sound and effective spraying program.

"Let modern farm chemistry save you time and increase your profits. We have nationally advertised products and equipment . . . The right chemicals for the job . . . adequate stocks . . . and, an experienced fieldman to serve you. Mapleton Feed and Hardware is proud to announce the appointment of Mr. Ken Jensen to its staff. Ken is ready to serve you in this area on all chemical and spraying problems, and to get you started on a profit making spray program. He comes to us with 5 years of practical experience in this field and is familiar with all chemical control measures."

During the past season, too, the Torgersons have made available to the county agent, free of charge, a complete spraying outfit which can be hooked to a tractor for demonstration purposes. Thus when the county agent stages weed control meetings, he has a sprayer to illustrate his talk.

In addition to the firm's spray program, there is also a large stock of garden insecticides and hand sprayers in the garden supply area of the store. Many farmers have sizable gardens and use a lot of garden insecticide. In addition, since Mapleton is only 35 miles northwest of Milwaukee, there are many city workers living in the region, and these people, too, have large gardens, for the most part, and buy garden supplies at Torgersons.

The Mapleton Feed & Hardware, along with three other merchants of this tiny town have been engaging in a cooperative advertising program this past year. The idea is to boost Mapleton, the "busiest little city in the U.S.A." as the copy states. Each ad to this effect is usually a quarter or half page, and shows a large map, plugging the location of Mapleton.

"All four merchants feel that this advertising is valuable," says Erling Torgerson. "In the first place it shows we are live wires, even though the town is small. Secondly, the map helps farmers locate us and think of us always. All of us have increased our annual volume since we started such advertising."

In addition, of course, each participating merchant, does his own advertising.

While T. A. and Erling Torgerson handle the display and sales end of the business, Norman Torgerson, another brother, handles the bookkeeping department. He has set up an efficient bookkeeping method to handle more than $300,000 annual volume of business.

The well rounded merchandising program of this farm supply firm also helps in the selling of fertilizer. This year the company sold carloads of fertilizer in this rich dairy and corn region. Prices obtained were fairly good, report the Torgersons, and collections were very satisfactory.

When a long article on the Torgersons' feed mill appeared in Feed sons' (a business paper associate with Croplife) Sept. 25, 1954, the To gersons were kept busy for week answering letters from interested feed men all over the United State Erling Torgerson says. The feed art cle enumerated 17 merchandisin points which have helped the Torge sons build a profitable feed busine in a small town.

Selling Ideas

Feedstuffs, an associated publication of Croplife, has prepared a 16-page Merchandising Handbook for dealers interested in getting a greater volume of sales and profits from animal and poultry health products. In the Handbook will be found practical merchandising ideas successfully used by retail stores.

20c per copy
Send coins if order is under $1

PRICE DISCOUNTS are available to firms desiring to use their own advertisement on the back cover on orders of 1,000 or more copies. Get complete details. Write to:

CROPLIFE
Merchandising Handbook
Box 67
Minneapolis 1, Minn.

OVER THE COUNTER

(Continued from page 9)

sanitation product. You have noted need for it; you suggest ways of bet tering hen house and barn operations

Maybe you'll make a sale, mayb you won't. But that's enough to sug gest this time. You bid him goodbye being as friendly as possible, invit him to visit your store and to call o you if he needs any fertilizer advice

In your truck you make notes o that call. You didn't sell anything perhaps. But he did mention h thought he'd raise more corn nex year.

Someday, well in advance of th seed season, you can make a specia call on him to try to get a seed cor order.

Visit No. 2

Call to ask for the seed corn busi ness. It may also be a good time t suggest fertilizer now. And don't for get to mention some special feed yo have.

Visit No. 3

This time call on him and tell him about your sprays for fruit. You've noticed he has a sizable orchard. May be you'll make a sale here. At least you are not displeasing him by asking for his other business. You have many other things to sell him, but the time may come when you'll get his ferti lizer business, too.

Visit No. 4

Call on him to try for a fly spray order. By this time you have visited the same farmer four times. You should have made a dent somewhere —gotten one order. It may be the start of many others.

Visit No. 5

This time you could call to try to sell a field sprayer. Through five separate calls you have presented much merchandise to a man who al ready has another supply source. But because you had a follow through you most likely will sell him other items, some of which carry a good markup, and eventually you may get his ferti lizer business, too.

Missouri Dealers Invited to Tours

Underway in Missouri this month and during early November are pas ture and forage demonstrations to which dealers and farmers are in vited. The demonstrations are de signed to show what can be done with proper fertilization practices.

According to B. B. Mainord, pro duction manager of the Soil Fertility & Plant Nutrition Council of Mis souri, Inc., tours this week were scheduled for Montgomery, Perry Stoddard, Monroe, DeKalb, Crawford and Howard counties. Other towns from which tours will emanate, and the dates, are: Kirksville and Tus cumbia, Oct. 22; Trenton and Buffalo Oct. 23; Mt. Vernon, Oct. 24; Butler Oct. 25; Houston, Nov. 1, and Center ville, Nov. 2. Tour members will assemble at the county agents' offices in the towns mentioned at 2 p.m. and demonstrations will begin at 3 p.m.

FARM SERVICE DATA

Extension Station Reports

More forage can help cut production costs for Minnesota dairy farmers, but corn and corn silage are as important as ever for the dairy herd.

S. A. Engene, University of Minnesota agricultural economist, told the Dairy Products Institute meeting on the St. Paul campus recently that improvements in corn raising are just as big a help to the dairy farmer's income as is improving forage production.

Crop records for 30 southern Minnesota farms, compiled for 1951-53, showed that average production costs were $36 per acre for corn, $45 for silage and $38 per acre for alfalfa.

Corn yielded 2,100 lb. of T. D. N. (total digestible nutrients) per acre, corn silage produced 2,300 lb., and the alfalfa fields yielded 1,700 lb. T. D. N. on these farms.

★

Purdue University agronomists report that subsoil fertilization can help insure moisture for crops during drouth and also drain the soil in wet seasons. This placement method puts plant nutrients down below the plow layer in subsoils that are acid and low in fertility.

The research men explain the benefits of subsoil fertilization this way:

Roots of growing plants need plenty of water, air and plant nutrients in order to produce profitable yields.

Ordinarily, the matter of air and plant nutrients need not be a problem. But in drouth periods, the surface moisture of the soil may be exhausted. When this happens it is an advantage to get the roots further down into the subsoil.

In many cases, the subsoil is tight, acid and low in fertility.

So if a farmer can open up such a soil with a deep plow or chisel and if he adds fertilizer and lime to the subsoil, it is possible for the crop roots to go deeper and find the water supply in the ground.

The Purdue agronomists report that an increasing number of farmers are becoming interested in subsoil fertilization.

★

The Middle West Soil Improvement Committee lists five profit-building benefits from top-dressing permanent pastures this fall with fertilizer containing nitrogen, phosphate and potash:

1—Beef and dairy cattle will have earlier grazing next spring; 2—There will be more grass and more palatable, too; 3—The grazing season from bluegrass will be stretched; 4—Feed costs will be lower; 5—Net returns per acre will be higher because of lower costs of production.

The committee says that tests indicate that fall-added fertilizer containing nitrogen as well as phosphate and potash, can give as effective results in many Corn Belt areas as fertilizer put on in the spring.

Some safeguards are necessary so far as nitrogen is concerned. In very sandy soils, where water drains through quickly, serious losses of nitrogen can occur. Also, if fertilizer is put on in the late fall just before growth stops, there will be a greater response in the spring.

★

Many Illinois stands of Merion bluegrass suffered rust damage this past summer. M. B. Linn, department of plant pathology at the University of Illinois College of Agriculture, says that Merion has been much more susceptible to rust than Kentucky bluegrass.

★

Midwestern agronomists report that it will pay farmers to give their lime spreaders a workout this fall.

Lime put on in the fall has a longer time to sweeten acid soils, the agronomists say. This can help build better legume stands next spring. Also, it will help promote increased efficiency from the mixed fertilizers a farmer uses to boost crop yields and cut costs of production.

The agronomists say the first step is to have the soil tested, to find out how much lime is actually needed. This takes out the guesswork and the risk of overliming. Too much lime on sandy loam or loam soils can cut down the availability of needed plant nutrients.

There's another thing to remember, too, the agronomists say. Lime by itself cannot do the entire job of soil building. Liming is simply the first step. It has to be teamed up with fertilizer containing nitrogen, phosphate and potash, where needed, to give the best long range profit building results.

★

Corn yields have been increased by an average of 45 bu. in one jump—with a program of irrigation and good fertilization on light sandy soil in the Hancock, Wis. area. The increase is reported by M. D. Groskopp at the University of Wisconsin Hancock Branch Experiment Station.

He compared yields of 16 hybrid strains on irrigated and non-irrigated plots. With irrigation, efficient production is essential, he said. That calls for heavier seeding rates.

Previous tests have shown that non-irrigated corn could use only 100 pounds of ammonium nitrate side-dressing, while irrigated plots with the higher plant population need more—around 300 lb.

★

Weed control research at South Dakota State College shows that fall operations are absolutely necessary in order to get rid of noxious weeds. Tests at the college have revealed post-harvest cultivation to be particularly successful on such perennial weeds as Canada thistle.

Almost any combination of spraying and cultivation was successful for control. Spraying with ¾ lb. of 2,4-D acid per acre followed three weeks later with cultivation did a good job of elimination. Control was equally good when cultivating was done first with the spraying completed three weeks later.

As much as 90% of the thistles were eliminated when the grain was sprayed early. The field was plowed right after harvest and sprayed or cultivated a second time after the weeds came back.

★

In bluegrass-seed production, 33 lb. of nitrogen fertilizer applied March 1 and Sept. 1 produced relatively high seed yields and maintained a dense stand of grass.

That's the report of University of Kentucky Agricultural Experiment Station agronomists, who recently concluded several years of such tests.

The March-and-September fertilization, in addition to high seed yields, also prevented invasions of weeds and wild grasses.

The testers tried 66 lb. an acre on some plots in March and found it produced a higher yield of clean bluegrass seed. But, they said, the sod later became thin and very weedy after the seed harvest.

Unfertilized pastures produced significantly lower seed yields, as did a 16½-lb.-an-acre application of fertilizer nitrogen four times a year.

Tractor Applies Starter Fertilizer, Weed Control Spray in One Trip

JANESVILLE, WIS.—Bill and Don Merriam, father and son farmers in Rock County, Wis., have remodeled their tractor to permit application of liquid starter fertilizer and weed control chemicals in the same trip over the field.

The tractor carries two tanks. The fertilizer box is off the corn planter with the hoses running from the tanks down to the fertilizer shoes. Two pumps on the back of the tractor, operating off the power takeoff, feed fertilizer into the fertilizer shoes and weed killer over the planted corn rows, directly on the soil.

The Merriams also have extended the front wheels of the tractor out 120 inches with special arms and supports to permit them to plant four rows of corn with the new wheel track method of planting.

The Merriams used pre-emergence weed spray in one of the tanks on the tractor. The other tank was filled with a liquid (6-18-0) starter fertilizer. The ground was covered just before plowing with a plow-down fertilizer—one half of the land with 500 lb. of 12-12-12 in dry form and one half with 300 lb. of 12-6-6 liquid fertilizer. Results will be compared at harvest.

Fertilizer Boosts Wheat Yields in Missouri Tests

COLUMBIA, MO. — John Fallon, extension soils specialist of the University of Missouri, reports that wheat yields were increased as much as 31 bu. per acre, when nitrogen, phosphate and potash fertilizer was added to a test plot where straw had been plowed under.

This fully fertilized plot yielded 47.25 bu. of wheat, compared to only 15.8 bu. on an unfertilized field where all the straw had been removed.

On a neighboring plot where nitrogen was omitted from the fertilizer treatment, wheat yields were about 42 bu. per acre.

Never Underestimate the
SALES POWER
of YOUR NAME in
YOUR MARKET
Your label means controlled sales! Write today...
PBI
PRIVATE BRANDS
300 So. 3rd • Dept. CL • Kansas City, Kansas

WANT STEEL PAILS AND DRUMS
NOW
VULCAN SHIPS
IMMEDIATELY

These Sizes Steel Pails and Drums Available
1-1½-2-2½-3-3½
4-5-6-6½-7-8-9
10-12 and 15 gallons

Whether you order a carton, truckload, carload or mixed combinations in the sizes shown, you can depend on Vulcan to ship promptly.

Many buyers find Vulcan's prompt delivery helps them keep container inventories at a minimum . . . no need to keep big stocks of containers on hand to meet production schedules. They order containers when needed . . . *in any quantity*. Vulcan gets them there in time!

Vulcan's tremendous warehouse stock in all styles and sizes steel pails and drums makes this possible . . . for Vulcan's sole interest is in manufacturing the finest in steel containers.

Vulcan's complete selection of all types nozzles and pouring spouts plus protective interior linings . . . wide choice of container colors . . . expert label design and lithographing facilities makes Vulcan your best source of supply.

So check Vulcan on your next container order. It could pay you in time and money saved!

over 40 years container experience

VULCAN CONTAINERS, INC.
Bellwood, Illinois (Chicago Suburb) Phone: Linden 4-5000
In Toronto, Canada—Vulcan Containers Limited.
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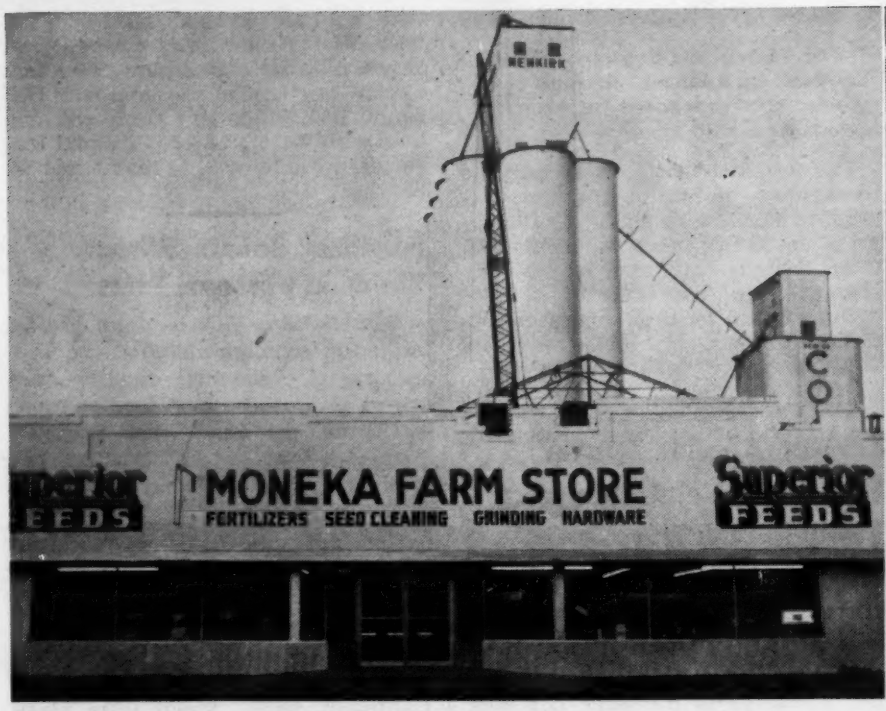


NEW COMPLETE FARM STORE—Aiming to satisfy all a farmer's production needs at one location, the first of a group of Moneka Farm Stores opened recently in Newkirk, Okla. Sponsored by the Crawford Chemical Co., Bartlesville, Okla., some 25 Moneka stores will be established in Oklahoma, Kansas, Nebraska, and Missouri, according to present long-range plans. The stores will handle feed, seed, fertilizer, hardware, and appliances. They will also be equipped to do custom grinding and mixing as well as seed cleaning and treating. Pictured above is the first store at Newkirk. The photo on the right shows the interior view of the self-service store, looking toward the hardware department. A fertilizer display stand is in the foreground.

Oklahoma Fertilizer Firm Opens First In Chain of Complete Farm Stores

BARTLESVILLE, OKLA. — The first unit of a new group of complete farm supply stores—known as the Moneka Farm Stores—opened at Newkirk, Okla., in July.

Sponsored by the Crawford Chemical Co., Bartlesville fertilizer manufacturing firm, the Newkirk store will serve as a model for a projected chain of similar retail outlets to be located in eastern Oklahoma, Kansas, southeastern Nebraska and western Missouri. Present plans call for establishment of five or six additional stores by January, 1957. The ultimate goal is 25 locations in the areas mentioned.

Moneka Farm Stores will handle feed, seed, fertilizer, hardware and appliances. The stores will be equipped for custom grinding and mixing as well as seed cleaning and treating. The aim is to make the stores a one-stop shopping center for all farm operating and maintenance supplies.

The Newkirk installation represents a complete remodeling of a feed store previously in that location and operated under the name of Horton's. Otis Horton, who sold his store to the new owners, continues as manager of the Moneka operation.

The remodeling job was complete, including everything from the store front to a complete new custom milling and seed handling plant in the rear.

The over-all area of the Moneka structure is 75 by 150 ft. The retail store occupies an area 75 ft. wide and 60 ft. deep fronting on the main street of the town. The 40 by 34 ft. mill room and 90 by 40 ft. storage area are behind the store. The mill is 50 ft. high.

Everything possible has been done to make the Moneka store a modern and efficient merchandising tool. First of all, the building has been given an inviting exterior. The modern store front features an unbroken display window on each side of the center entrance and employs the new type materials which give the place an up-to-date appearance. It looks as modern as any newly built chain store anywhere.

Inside the same principles of modern merchandising have been employed. The store is set up on the "serve-yourself" basis that today's supermarket groceries have made popular. Every item sold is conveniently displayed and bears a clearly marked price tag. The customer is free to wander throughout the store and shop, providing plenty of opportunity for "impulse" buying.

The store is air conditioned, probably one of the few such installations in the retail feed and fertilizer business. Provision has been made for ample parking space for customers and one of the important features is that the store provides customers with rest rooms for both men and women. Adequate public rest room facilities are scarce in Newkirk and the Moneka managers feel that customers will appreciate these facilities.

Harold F. Hedges, president of the Crawford Chemical Co., is convinced that there is a big future for modern, one-stop farm supply stores. Customers have paid many compliments to the new installation and have remarked how they like to shop where they can find all of their farm production needs in one place. The store has drawn some customers from more than 50 miles and many farmers have passed right through larger towns to get to the Moneka place.

In addition to being retail distributors, the Moneka stores will also serve a wholesale function as far as the Crawford Chemical Co. fertilizer products are concerned. The locations will be wholesale warehouse depots serving other fertilizer dealers in the nearby region.

WHAT'S NEW

(Continued from page 10)

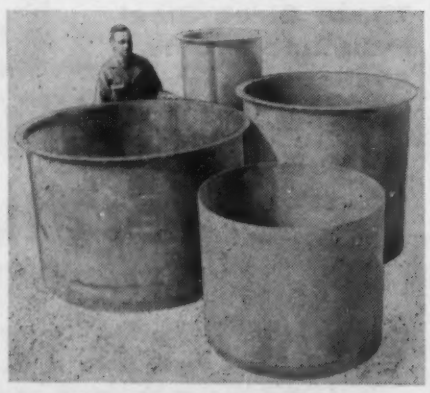
CRAG Herbicide-1 can save well over 75% of the labor that would go into handweeding and this new pamphlet shows how strawberry plants grow with increased vigor and give greater yields when strawberry rows are kept weedfree. The product kills weed seeds as they sprout and will keep out most broad-leaved and grass weeds for three to six weeks. Late summer applications help to prevent early fall and winter weeds." Copies of the folder are available by checking No. 6480 on the coupon and mailing it to Croplife.

No. 6481—Insecticide Formulations

Information concerning insecticide formulations incorporating tetraethyl pyrophosphate is available from Eastman Chemical Products, Inc. The company's trade name for its tetraethyl pyrophosphate product is TEPP. According to the company's literature, "the unique distinction possessed by insecticides based on TEPP is their property of decomposing into a harmless residue within 48 hours after application." The formulations are recommended for mites, aphids, nymphs, thrips, caterpillars, flea beetles and other soft-bellied insects on fruit and vegetable crops. The company also has a film available on the subject. To secure more complete details check No. 6481 on the coupon and drop it in the mail.

No. 6479—Farm Chemical Tanks

Corrosion-resistant polyester glass reinforced tanks are being offered by Haveg Industries, Inc. It is claimed



that the tanks resist the attack of liquid fertilizer solutions, phosphoric and sulfuric acids as well as other fertilizers, insecticides and herbicides. Company officials say that the polyester glass tanks are also extremely light. The heaviest of those pictured is 150 lb., holds 600 gal. and can be put in place by two men. Flat covers are available for all tanks. A wide range of sizes (up to 30,000 gal.) is available. The firm also designs tanks for individual requirements. Also available is a fume duct for removal of corrosive and obnoxious vapors, scrubbing systems and related accessories. Secure more complete details by checking No. 6479 on the coupon and mailing it to Croplife.

No. 6478—Rotary Feeder, Seeder

The Smith-Douglass Co. has introduced a lightweight fertilizer distributor and seed sower, called the Nutro feeder and seeder. It is carried on the shoulder and is designed to carry up to 25 lb. of material. Movement of a lightweight handle applies seed or pelleted fertilizer in a rotary manner. The advantage, say company officials, is the distributor's ability to distribute fertilizer or seed evenly and steadily without leaving any area uncovered. To secure more complete details check No. 6478 on the coupon and mail it to Croplife.

No. 6475—Film

A new film, "Low-Volume Spraying," produced by the Hercules Powder Co., is the seventh in a series of films dealing with insect control, now available from Hercules. The newest in the series, like the first six, is available in 16-mm., sound-and-color. It depicts the procedures for mixing insecticides and adjusting sprayers for efficient operation. "Low-Volume Spraying" is a 14-min. film. Secure complete details about securing film by checking No. 6475 on the coupon and mailing it to Croplife.

No. 6476—Soil Fertility Handbook

Quantity prices of a publication entitled, "Soil Fertility Handbook" are available from the publisher of Successful Farming. The handbook was prepared from an article published recently by the magazine. Sections of the handbook are devoted to soil tests, yield goals and fertilizer needs, yield checks, plant food deficiencies, drainage, fertilizer fact and fancy, and how, when and where to apply fertilizer. For price information on the handbook check No. 6476 on the coupon and mail it to Croplife.

Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

When Oscar Schoenfeld came home that fall afternoon at 5:45, he wiped his feet carefully on the worn straw mat on the front porch. Then he entered the house, hung his felt hat on the elk head coat rack in the hall and went into the living room. He sat down, his nose sniffing critically at the odor of spareribs and sauerkraut which wafted through the house. Then he pulled a copy of Croplife out of his pocket, and started to scan it, his lips set tightly.

Minnie, his thin, worried wife, with her black hair done in a knot, sighed as she fussed over the dinner which was cooking on an old wood stove in the kitchen. She knew from experience that when something was wrong at the office, Oscar never greeted her, but went and sat down without a word.

She also knew that when Oscar took out Croplife and started reading the classified page, it meant only one thing, namely that he was so disgusted with his partner, Pat McGillicuddy, that he was driven to the point where he was looking for a fertilizer store to buy—on his own. Minnie doubted Oscar would ever dare to buy and operate a store of his own, but he always liked to think he could, if it came right down to it.

Nervously fingering her apron, Minnie advanced to the door into the living room. "Oscar, we will eat in about five minutes," she said timidly.

This was her way of telling Oscar it was time to wash up for dinner, especially if he wanted warm food, which he did.

Oscar got quickly to his feet as he always did at the mention of food. He turned and directed a baleful glance at his slightly cringing wife.

"What," he thundered, "Is wrong with saving money?"

Minnie's eyes popped wide in alarm, but wisely she said nothing.

Oscar's big fist struck the woodwork at the door for emphasis. "And what is wrong with trying to cut expenses?"

Once more Minnie wisely held her own counsel.

"And why should we go easy when we try to collect money from some farmer that owes us for three months? Ach, I never heard such foolishness."

Oscar brushed by Minnie and walked into the kitchen. He washed his hands, flung the water off them and grabbed a towel, his face more red than normal.

"It is just like a disease Pat's got, this spending, spending money all the time. Ach, why can't he leave a little of it in the bank once in a while? It won't get rusty. Himmel, why must he keep on piling up bills for this and that till we get sore arms writing out checks. And why am I so old fashioned? Why should I keep up with the times? Keep up for what—for to go bankrupt?"

Minnie always kept quiet when Oscar raved about his partner's sales promotions and spending habits. She always knew that when he "blew off" about his partner before dinner, he could eat with a more quiet attitude. Then he wouldn't be so apt to take liver pills and bicarbonate of soda in the night, and groan and toss and fling his arms in his sleep as if fighting off something or other.

"What has that Pat done now?" she asked. It was a question she asked almost automatically now, it had gotten to be such a habit over the years.

"What is the matter?" Oscar repeated, almost hissing the words. "Now he has a crazy idea about putting on a square dance and refreshments for all the customers that buy fall fertilizer. Hoedown for plowdown, he wants to call it. He will only give free tickets to customers who have bought fertilizer for fall plowdown, or those that put in an order for spring fertilizer. Everybody else has to pay $1 to come and dance."

"That will be expensive for you and him," Minnie observed timidly. "The music will cost something."

"Expensive!" thundered Oscar again. "You bet it will be expensive. He is going to have somebody judge the best polka dancers and waltzers. Five prizes in all. Each winner gets an extra 5% discount on his fertilizer. Ach, what monkey business."

"But the business grows every year, so some of Pat's ideas must work," Minnie said.

"They do not work!" Oscar exploded. "They just make expense. We would make much more profit, if he would cut out those sales promotions. We make money because I cut the costs, Minnie. Don't ever forget that. Ach, if I would let him he would have me dancing at the hoedown in some hula hula costume. How crazy do we have to get to sell a little fertilizer?"

Minnie could not help but smile inwardly at this picture of Oscar doing the hula hula. In fact she was amazed that his imagination had gone that far astray.

"I am getting fed up with that spender McGillicuddy, Minnie," Oscar said impatiently. "Tonight I will take all the old copies of Croplife and look through them carefully. I may write to some of those fellows who want to sell their businesses. Himmel, I will fall over dead one of these days if I have to stand that Pat much longer. I—"

Minnie sensed that the pent-up adrenalin in Oscar's system had been released and dissipated in the blood, and that the tide of it was ebbing.

"Sit down and eat your sauerkraut and spareribs," she said soothingly. "You like it when it's hot. I got it 17¢ cheaper by walking seven blocks to that new market at the edge of town."

Alfalfa Responds Well to Fertilizer In Illinois Trials

DIXON SPRINGS, ILL.—Fertilized alfalfa at the Dixon Springs Experiment Station of the University of Illinois produced four times as much forage as alfalfa that was not fertilized.

Both stands of alfalfa were seeded in the fall of 1950 on land that had plenty of lime, phosphate and potash according to soil test, says L. E. Gard, crops specialist at the station.

One plot was top-dressed every year with 300 lb. of 0-20-0 and 200 lb. of 0-0-60 an acre. The other plot was not given any fertilizer other than that already in the soil.

Mr. Gard reports yields of more than two tons of hay from the fertilized alfalfa during the fourth year compared with only one-half ton on the non-fertilized alfalfa. Fifth-year yield on the non-fertilized alfalfa dropped to one-fourth ton, while the fertilized stand was still usable for good pasture in the sixth year.

Mr. Gard said this experiment shows that alfalfa responds well to soil that tests very high for phosphate and potash.

Cost of top-dressing during the five years of the experiment was $44 an acre. The extra yield of hay more than paid for the cost of the fertilizer, Mr. Gard says.

Phosphate Gives Wheat a Boost in Purdue Experiments

LAFAYETTE, IND.—Experiments conducted by Stanley A. Barber, Purdue University agronomist, have shown that phosphate has a definite effect on wheat.

Mr. Barber found that one experimental plot which received a phosphate application at the rate of 150 lb. per acre at seeding yielded 61 bu. per acre. In contrast, a plot which received no phosphate yielded but 32 bu. per acre.

Soil tests showed both of these plots to have the same soil phosphate level—100—before the trial was conducted. The figure 100 means the soil tested low to medium in phosphate.

Increased growth, a thicker stand, and earlier maturity were also evident in the phosphate fertilized wheat.

Mr. Barber found that the soil phosphate level will affect the response from additional phosphate. On soil where the phosphate level had been increased to a high level—200—by broadcast applications four years ago, the specialist applied 75 lb. of phosphate at seeding on one plot and none on another.

Yield on the plot which received additional phosphate was 61 bu. per acre. When no additional phosphate was applied the yield dropped to 41 bu. per acre.

On plots where the soil phosphate level was increased to 500—a very high level—by the broadcast application of phosphate four years ago, fertilizer at seeding had very little effect. The yield without row fertilizer was 56 bu. per acre as compared to 60 bu. per acre where 30 lb. of phosphate was placed in the row.

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Here's how a Stewart-Warner Farm Speedometer can help you save materials and improve crops:

1. Assures uniform distribution by accurately measuring over-the-ground speed and distance traveled. Can be installed on any tractor, fertilizer rig, spray rig, combine or other wheeled equipment.
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Instrument Division, Dept. CL-106
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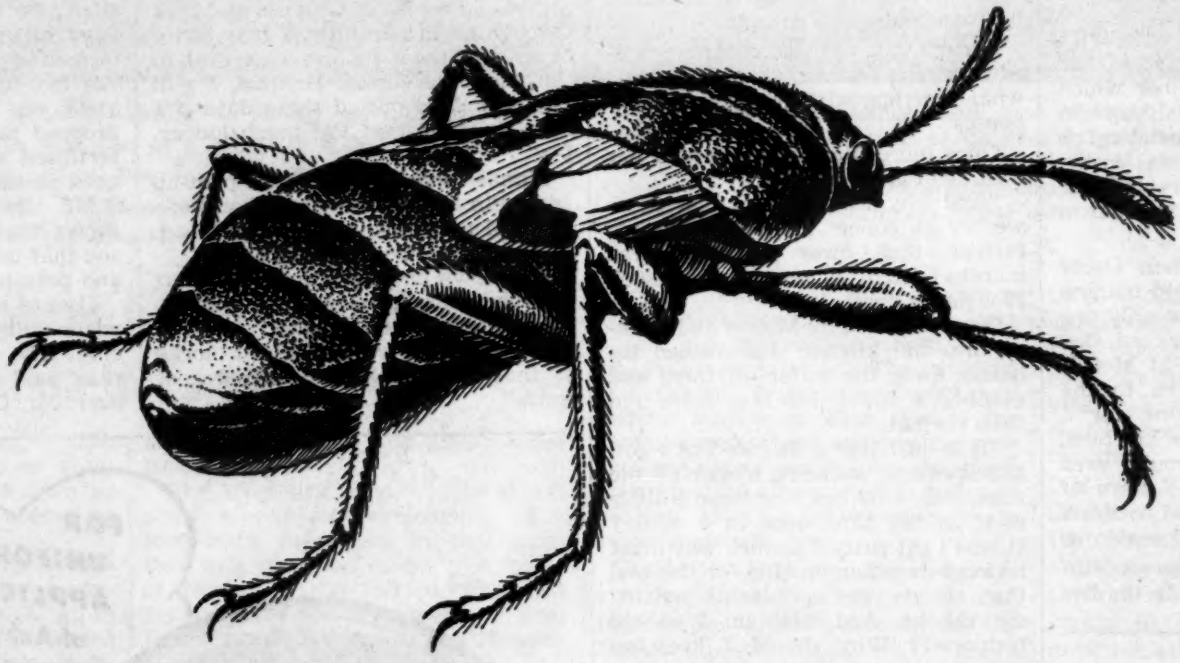
BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



Lawn Chinch Bug

How to Identify

Lawn chinch bugs are quite small, black in color and about ⅛ inch in length with white spots on their wings. They feed exclusively on corn and grasses and during periods of abundance, or in dry weather, lawns may be damaged seriously by the pest.

Damage Done by the Pest

The lawn chinch bug attacks the lawn from above ground. It sucks plant juices and injects into the plant a toxic salivary substance which damages the plant and causes bare spots and brown patches in the grass. Injury is usually seen first along driveways, walks and curbings. In thick, matted turfs, damage is much more severe than in new or unfertilized lawns.

Habits of Lawn Chinch Bug

After spending the winter months in sheltered areas, the bug appears in the early warm days of spring and begins the process of laying eggs in which it engages for nearly a month. Nymphs hatch about two days later and begin to feed.

Lawn Chinch Bug Control

As in most cases, no single control material is used to halt the bug. A number of sprays, dusts and barriers of various sorts have been employed to control the lawn chinch bug. Toxaphene, chlordane, aldrin and dieldrin, rotenone, DDT, sabadilla and nicotine all appear in various literature as means of control. Methods of application appear to be of particular importance, with emulsions and granular forms being preferred in a number of cases. Lawns should be watered both before and after application.

Drawing of Lawn Chinch Bug furnished Croplife through courtesy of Shell Chemical Corporation, New York.

Previous "Bug of the Week" features have been reprinted in attractive 24-page booklet, priced at 25¢ single copies; reduced rates in quantities. Write Croplife Reprint Dept., Box 67, Minneapolis 1, Minn.

NEW JERSEY MEETING

(Continued from page 1)

ding the 1950 report on the ferti-
r industry published by the com-
ssion. It is called "Report of the
deral Trade Commission on the
rtilizer Industry," and is available
m the FTC or the U.S. Govern-
nt Printing Office.

Trade practice conferences are
d, he said, for industries that are
erested in developing a better un-
rstanding among the members of
t industry in connection with such
oblems as misrepresentation and
ception in the sale of industry prod-
s, guarantees, warranties, fictitious
cing, misrepresentations as to the
aracter of business and other mat-
s.

**"I trust that this great industry
pon which the future of the world
o much depends will endeavor to
aintain the highest standards of
ompetition, and when your story is
old to your prospective customers
hat you will continue to tell the
tory by way of advertising in a
ay that is a credit to your great
ndustry," Mr. Anderson said.**

Dr. Bailey B. Pepper, chairman of
e department of entomology at
utgers, urged caution in adoption
fertilizer-pesticide mixtures for
neral purposes, especially in New
rsey with its marked diversifica-
on.

In his experience, said Dr. Pepper,
ixing pesticides with fertilizer is
t always the best way to get the
sticide where it is needed, mainly
cause of uneven distribution. Some
ilures have been experienced, he
ntinued, with certain treated plots
aving a higher soil insect population
an plots on which nothing was used.

The Rutgers entomologist attrib-
ed this to a low level of pesticide
plication that killed beetles and
her predators without getting to
e enemy.

And what about stability? Insecti-
de incorporated with fertilizer may
ow one level of toxicity at mixing
me, but show a sharp drop in effi-
ency after standing, Dr. Pepper
id.

Although pesticide-fertilizer mix-
res eliminate one operation and
ay work in some areas, a general
ecommendation of a pesticide mix
r New Jersey is not in the best in-
rests of New Jersey agriculture, Dr.
epper declared.

**There is every reason to believe
hat technological progress in the
ertilizer industry will continue at
n accelerated rate, assuring agri-
culture of the very best in plant
foods, stated Dr. Edwin C. Kapusta
n a review of recent trends in fer-
tilizer manufacture. Dr. Kapusta,
technical service director of the
United States Potash Company,
New York, said the full impact of
expansion in the nitrogen segment
of the fertilizer industry in the past
few years has not yet been felt.
Further improvements and progress
are inevitable, he said, as research
continues.**

He noted expansion also in the
hosphate and potash branches of the
ndustry.

Concerning mixed fertilizers, Dr.
apusta estimated that 15 to 20% of
ll mixtures produced in 1955-56 were
n a granular form, and he predicted
ven greater application of granula-
ion processes in the future.

Many factors, he said, including
rocess economics, availability of raw
naterials, agronomic considerations
nd consumer use preference, will
lay important roles in determining
he ultimate place of liquid mixed
ertilizers in the over-all fertilizer
icture.

The 1957 fertilizer bulletin issued
y the New Jersey experiment sta-
ion will list no changes in grade, and
here will be only minor changes in
ecommendations for specific crops,
r. E. R. Purvis, professor of soils,
advised the group. Dr. Purvis described a successful project in which he farmed a section of New Jersey's so-called "pine barrens," and harvested crops far above average.

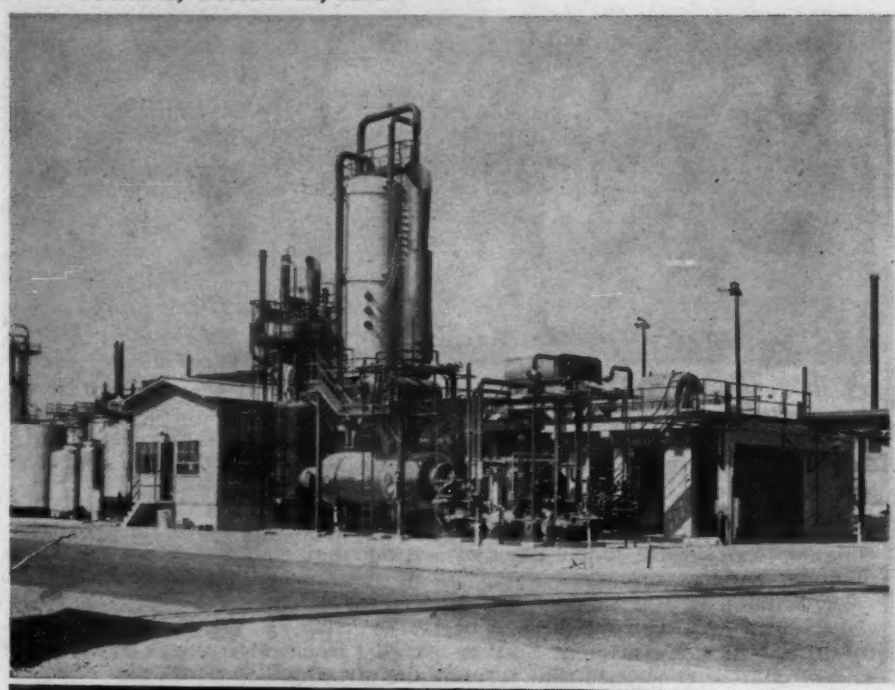
More and better fertilizer is probably the best answer to the commonly-asked question, "What's wrong with my lawn?" according to Dr. Ralph Engel, Rutgers turf researcher. Both soluble and insoluble nitrogen fertilizers find uses in lawn and turf management. As a general practice, he discourages summer fertilization of lawns, he said.

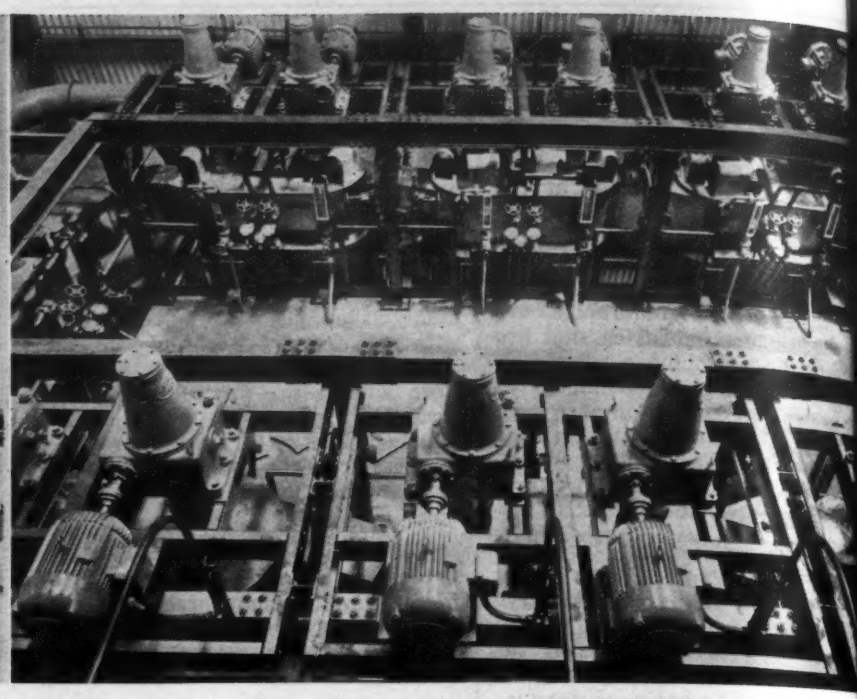
Raymond P. Korbobo, extension specialist in ornamental horticulture, noted the need for more research in fertilization of ornamentals. However, it's a safe bet, he said, that relatively few homeowners realize that their ornamentals need to be fed, along with their lawns and gardens. Most "blights," he said are simple cases of plant starvation.

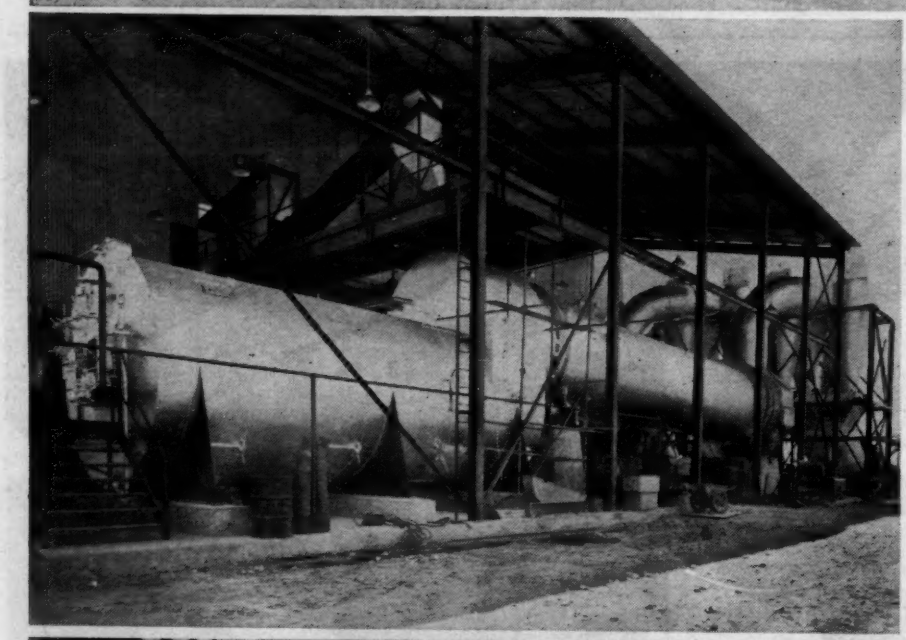
Dr. William H. Martin, dean of the College of Agriculture and director of the Agricultural Experiment Station, said his staff is concerned that farmers do not cut down on fertilizers, spray materials and other essentials in years when they feel a need to reduce expenses.

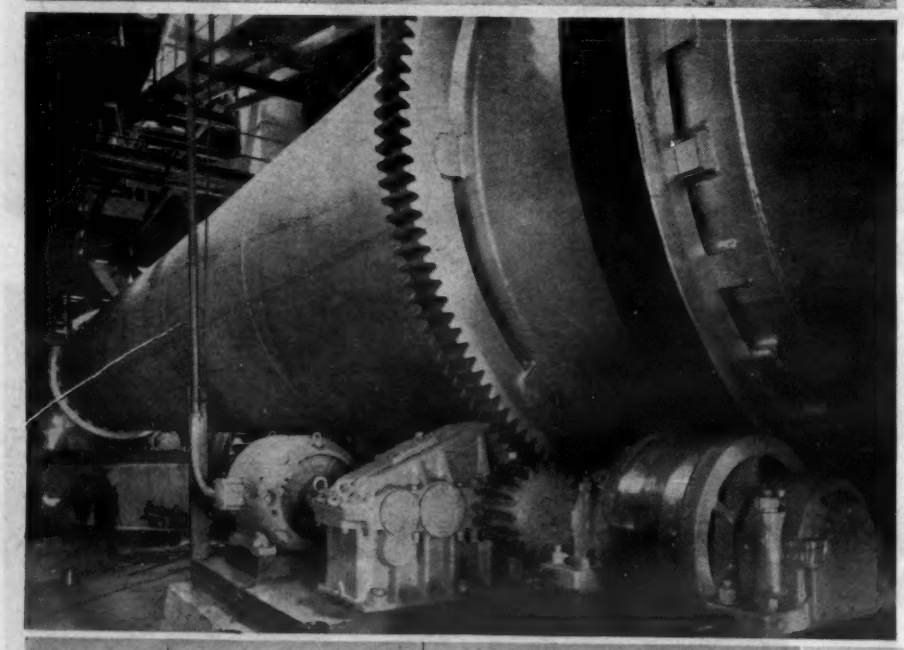
Dr. Stacy B. Randle, research specialist in chemistry, was chairman of the meeting.

AT RUTGERS CONFERENCE—Taking a close look at the program at the Rutgers fertilizer conference Sept. 27 are Dr. Edwin C. Kapusta, U.S. Potash Co.; Dr. Stacy B. Randle of Rutgers, chairman of the conference; Sigurd Anderson, Federal Trade Commission, and Dr. Russell B. Alderfer, chairman, soils department, Rutgers.









Calspray's New Multi-Million Dollar Plant Food Facilities Near Completion

RICHMOND, CAL.—California Spray Chemical Corp. is making final preparations to go on stream with its new multi-million dollar plant food manufacturing facilities here, the firm has announced.

The new plant will have a capacity of producing 300 tons of granulated plant food, 300 tons of liquid ammonium nitrate, 150 tons of ammonium sulfate, 200 tons liquid calcium-ammonium nitrate and 425 tons of aqua ammonia a day.

Calspray says that the manufacture of pelleted fertilizers utilizes nitric acid as the acidulating agent to obtain available phosphoric acid from phosphate rock, a departure from the common practice in U.S. fertilizer production of using sulfuric acid t make phosphorus available.

This process of nitric acidulatio was developed by Societe Potasse e Engrais Chimiques (PEC).

The basic materials for Calspray' operations are supplied by the recent ly completed ammonia and nitric aci manufacturing plant at the Richmon refinery of the corporation's paren company, the Standard Oil Company of California.

SOCAL's multi-million dollar am monia plant synthesizes hydrogen de rived from natural gas and nitroge from air to produce anhydrous am monia at the rate of 300 tons per day This plant, an M. W. Kellogg design is one of the largest of its kind in the western states, involving motors to-

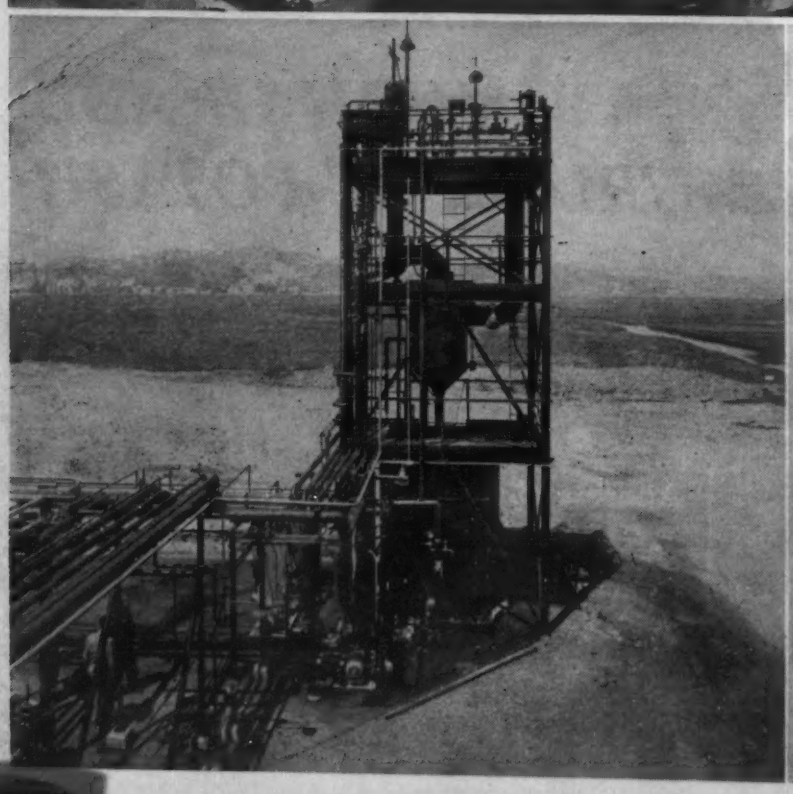
CALSPRAY'S NEW FERTILIZER FACILITIES—Top row, left to right: Nitric acid production plant at the Richmond, Cal. plant of Calspray. Output of this plant supplies nitric acid for manufacture of granular plant food materials. Photo at right shows reactor floor where basic plant food materials are run through a series of reactors in the initial stages of forming pellets by the nitric acidulation process developed by Societe Potasse et Engrais Chimiques (PEC). Calspray is the first U.S. firm to use this process.

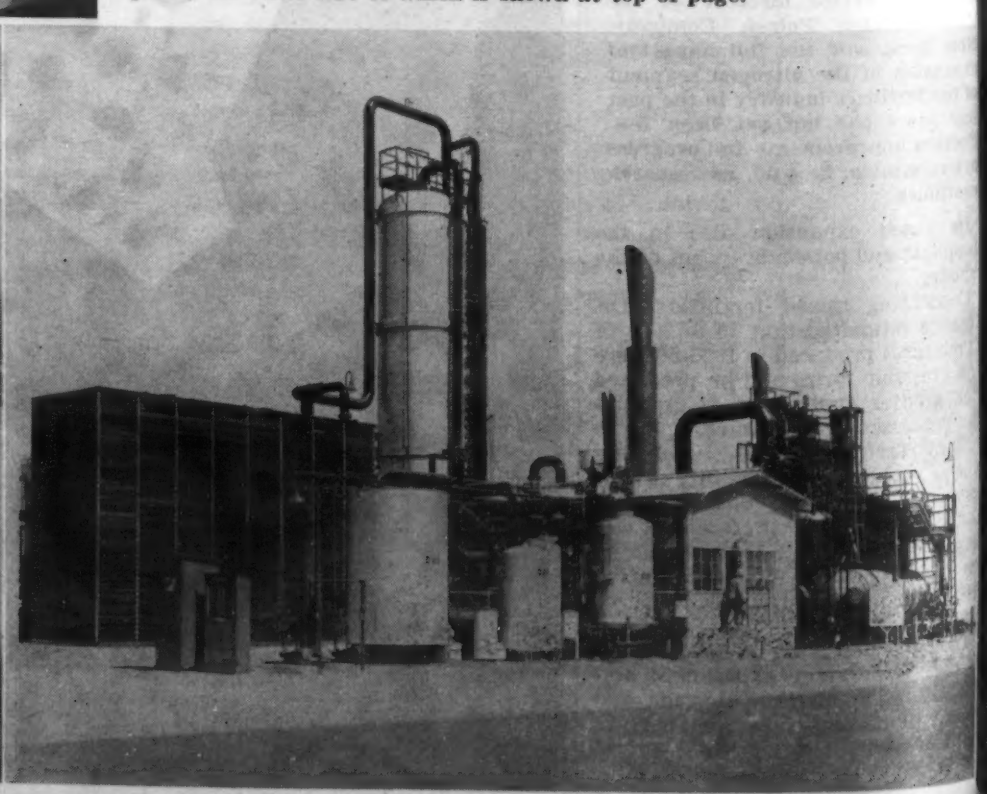
Second photo at left: Driers for conditioning granular fertilizer materials. Moist granules from granulators are conveyed to these rotary driers. Vertical cones in the background are part of system for recovering fines removed from the finished product.

Third photo at left: Rotary cooler at the Calspray plant takes pellets from the drier and passes them along to a vibrating screen. Materials too fine for use are recovered and returned to the granulator.

Bottom, left: The reactor and separator unit, heart of the Stengel process for manufacture of ammonium nitrate solutions. This system allows wide flexibility and accurate control of finished product quality. The unit shown here is one of the divisions of Calspray's new fertilizer plant.

Bottom, right: Cooling system and tower in the nitric acid production plant, the other side of which is shown at top of page.





ing 12,000 H.P., synthesis pressure
,700 lb. per square inch, and steel
age spheres with capacity of six
lion pounds of ammonia each.
part of the ammonia output is
lized at SOCAL's nitric acid plant
the rest flows by pipeline to Cal-
ay's plant food plants.
The nitric acid plant is a Chemical
Industrial Corp. design, a modifi-
ion of the DuPont process of burn-
ammonia and absorbing the oxides
ier pressure. It has capacity to
duce 250 tons per day of 100%
NO, at approximately 55%-60%
ength.
The entire output of nitric acid is
rried by pipeline to Calspray's
nts.
Calspray's complex pelleted ferti-
er plant is a Chemical and Indus-
l Corp. design utilizing the PEC
cess.
Another division of the Calspray
eration is the ammonium nitrate
nt which makes ammonium nitrate
utions to be sold as liquid ferti-
ers and to provide basic material
such operations as the company's
desto, Cal., plant where complete
tilizers are made. This division em-
ys the new CSC Stengel Process,
ensed by C & I.
A third division manufactures am-
nium sulphate from anhydrous am-
nia and sulfuric acid, the latter
tained largely as a by-product of
SOCAL refinery. A fourth divi-
n manufactures a calcium-ammoni-
nitrate solution—lime rock treat-
with nitric acid.
The Calspray capacity production
ds up to 950 tons or 25 freight car-
ds per day of plant food materials.
addition, the company will store
hydrous ammonia for sale as such
d will also convert anhydrous to
ua ammonia for sale, at the rate of
5 tons per day.
Present marketing area includes
eleven far western states. The
cision to enter the field of fertilizer
nufacture on this large scale was
sed on an analysis of the potential
eds of the present marketing area,
cording to Calspray. Fertilizer sales
this area have more than doubled
ce 1942 and according to Calspray
okesmen "the surface has not even
en scratched."
For instance, relatively few farm-
are fertilizing their pasture lands,
spokesmen said. Yet, conclusive
ts throughout the country have
own that by proper fertilization the
rage yield per acre can be increased
ree to four times. This is just one
ample of a tremendous field that
s hardly been touched.

alifornia Forum
o Hear Miticide Panel

BAKERSFIELD, CAL.—A panel
scussion on miticides will be a fea-
re of the program of the Central
alifornia Agricultural Forum, to be
ld at Bakersfield Inn here Oct. 24.
According to David N. Wright,
rum secretary, the miticide panel
ll start at 1:30 p.m. under the di-
ction of Dr. Guy F. Macleod, Sun-
nd Chemical Co., Fresno.
Panel members and their topics
ll be Dr. H. T. Reynolds, University
California, Riverside, "Discussion
Miticides—Old and New"; Gordon
Smith, University of California,
after, Cal., "Mite Control on Cot-
n"; and O. B. Hitchcock, Chemagro
rp., New York, "Formulation of
stox."
The morning session will include
lks on cotton marketing and the
l bank, and the forum will close
th a film on cotton.

PRICE LIST AVAILABLE

NEW YORK—Faesy & Besthoff,
c., New York, has just published
e 1957 price list for its line of gar-
n and home agricultural chemicals.
e list, now covering 26 products,
ves a description of each, including
ethods of packaging, and dealer and
ggested consumer prices. Copies of
e new price list may be obtained
om Faesy & Besthoff, Inc., 25 East
St., New York 10, N.Y.

Nitrogen, Phosphate Important for Corn in Western Minnesota

MORRIS, MINN.—Soils in western Minnesota need phosphorus and nitrogen more than any other elements, John Grava, University of Minnesota soils scientist, said here recently at the Livestock, Corn and Soybean Field Day at the West Central School and Experiment Station. He said recent field trials at the Morris station showed that the most profitable fertilizing rates for corn were 70 lb. of nitrogen, 75 lb. phosphate and 58 lb. of potash.

Fields that received that application yielded 98 bu. of corn per acre, compared to 75 bu. on fields that got only 9 lb. of nitrogen, 36 lb. of phosphate and 18 lb. of potash. Minnesota's average corn yield is about 50 bu. per acre.

The nitrogen and phosphate fertilizer also left a "carry-over" for flax crops planted on the same fields the following year. Flax following corn that received the low fertilizer rate yielded 22 bu. per acre, compared to 29 bu. on fields where corn the year before had received 70 lb. of nitrogen, 75 lb. phosphate and 58 lb. of potash per acre.

The flax got no additional fertilizer, except for what had been applied the year before for corn.

DR. W. A. SEAY PROMOTED

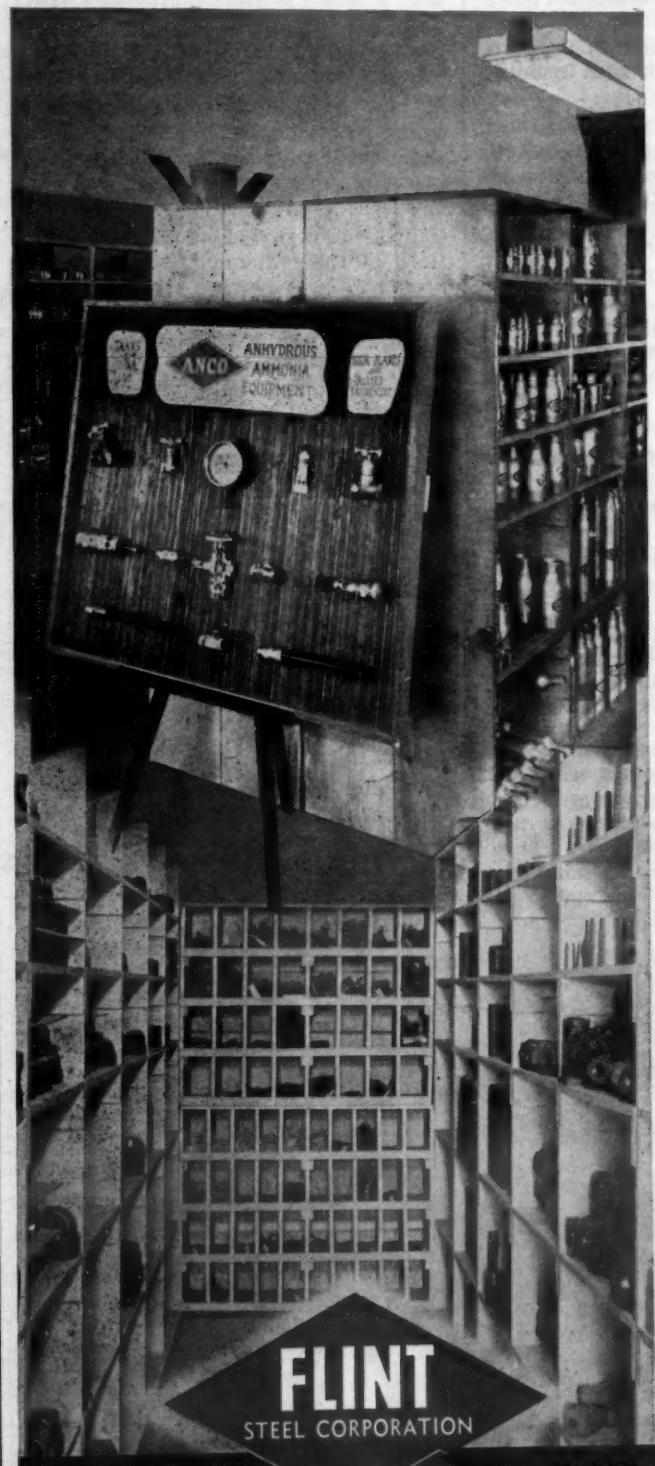
LEXINGTON, KY.—The University of Kentucky College of Agriculture has announced the appointment of Dr. W. A. Seay as administrative assistant to the dean and director of the college to aid in coordinating the teaching, research and extension programs in agriculture and home economics. He assumed the new position Sept. 1. Dr. Seay joined the agronomy department in 1946 as an assistant in the soils laboratory. He was appointed associate professor in the department in June, 1953 and one year later was given the rank of agronomist and professor of soils.

Nominees Chosen for GLF Board of Directors

ITHACA, N.Y.—Seven farmers have been nominated for election to board of directors of Cooperative G.L.F. Exchange, Inc., farmer purchasing cooperative of Ithaca, N.Y. All incumbent, five nominees were chosen at committeemen meetings, one each by New York Grange and New York Farm Bureau.

Henry W. Bibus, Jr., Wrightstown, N.J.; Ralph L. Culver, Laceyville, Pa.; Harold A. Giles, Union Springs, N.Y.; Wallace H. Rich, Hobart, N.Y. and Orrin F. Ross, Lowville, N.Y., were named at meetings. The Grange nominated Earl B. Clark, North Norwich, N.Y. and Morris T. Johnson, Batavia, N.Y. is the Farm Bureau candidate.

The candidates will stand for election during the 36th G.L.F. stockholders' annual meeting, Oct. 18-19 in Syracuse, N.Y., to be attended by some 3,000 committeemen.



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FORMULATORS

(Continued from page 1)

future, Dr. Smith pointed out that the industry and entomology in general face similar problems. He said that the trade must, of course, sell its products and make a profit but to do this the user must be educated and correct application must be made of the products used for control of the pests.

Education of the grower takes many forms, Dr. Smith said, and sources for such information come from the pesticide salesman, the county agent, the extension service and from his fellow farmers.

"Therefore, it is necessary for everyone concerned to be as up to date as possible in the information which he is passing on," he said.

To possess the necessary know-how, the farmer must be able to recognize damage done by given pests, how to check fields and how to apply pesticides correctly, Dr. Smith said.

"I think half of the battle is won if a man recognizes the damage being caused by the pest," he said. The instance of southern corn root worm was given as an example.

Dr. Smith said that not much was heard about damage done by this pest until it had been demonstrated that its destruction of crops was of considerable consequence. "Since then, we have received many reports about this pest on peanuts," Dr. Smith said.

Another example of this sort of information was seen in the case of the oriental fruit moth on peaches. It was not until good control had been found for plum curculio, thought to be the villain, that it was discovered that damage persisted and it was the oriental fruit moth that was causing a major portion of the trouble, Dr. Smith said.

It is thus seen that recognition of the pest causing damage to a plant or a crop is necessary before adequate control methods may be brought into play. Both the correct kind of pesticide and how it is applied are of great importance. "You can't control flea beetles and aphids which occur on the under side of the leaf, if the insecticide is applied to the top of the leaf," Dr. Smith said.

Along this line he told his listeners that four important factors must be considered in applying insecticides. The material must be put on in such a way (1) to gain good control, (2) so that residues will conform to the permissible tolerance level at time of harvest, (3) so that a minimum amount of expense is involved in both cost of materials and application method and (4) so that all precautions are observed to protect the operator.

Insect resistance to pesticides was pointed out as being another serious factor in planning for the future. However, real as this problem is, Dr. Smith told his listeners not to blame resistance for poor results if application has been done carelessly, timed badly, or the wrong materials used.

Dr. Smith called for an integrated control system where all types of pests, including weeds and plant diseases as well as insects, are taken into consideration in planning a program.

He related incidents where the control of one insect pest made possible the increasing numbers of another that had previously been kept under control by natural means. "It behooves all of us to be very careful that we do not recommend the use of a chemical that might develop still greater problems," he said.

Even the matter of weed control can have its effect on entomology, inasmuch as herbicides can destroy the natural habitat of beneficial insects and allow detrimental pests to build up in dangerous numbers, Dr. Smith said.

By the same token, though, he said it might also be possible to destroy some of the alternate hosts of harmful bugs through the killing of weeds, and thus do a beneficial job from two standpoints.

"Therefore, as I see the future," Dr. Smith said, "it will be necessary for us to try to correlate and coordinate the application of all chemicals to the plant and to the soil. This I would take to include fertilizers, weed killers, fungicides and insecticides."

Dr. Cochran described some of the entomological and research programs now under way in South Carolina. Terming them as "progress reports," he told the group about research on insects attacking man and domestic animals, cotton insects, vegetable insects, corn pests, tobacco insects and peach insects. He also discussed pesticide residues briefly and described the distribution and identification of some economic insects now in South Carolina.

Reported cotton insect resistance to chlorinated hydrocarbon insecticides is the subject of intensive investigation by the USDA in cooperation with the South Carolina Agricultural Experiment Station, he said.

"Data to date, indicate that the boll weevils in some areas are more difficult to control with these insecticides," he said. "This may account for the increased number of complaints of lack of control of boll weevils in the state during the past season."

Certain vegetable insects, such as wireworms, also are developing resistance to pesticides, Dr. Cochran said.

"Although losses due to wireworms attacking potatoes were almost eliminated a few years ago with the widespread use of chlorinated hydrocarbon insecticides, it now appears that this insect too can be added to the list of resistant ones," he said.

Appearance of the spotted alfalfa aphid in South Carolina was regarded by Dr. Cochran as being probably the most significant information gained this year. "This pest was found in varying numbers in all of the alfalfa fields surveyed in the Piedmont area of South Carolina," he said.

A study of to what extent pesticide residues are being built up in the soil by direct application and when toxicants are applied to cotton is being made in the state, Dr. Cochran said.

Control programs now under way in the state, he said, concern the white fringed beetle, sweet potato weevil, Japanese beetle and phony peach disease.

In a discussion on new developments in herbicides, Dr. Ferguson pointed out that the use of weed killers has an over-all effect on the agricultural economy, and declared that the chief value of these materials lies in their ability to lower the cost of crop production.

The Miller Amendment will force selectivity in herbicides, Dr. Ferguson said. He emphasized that selectivity in safety for a crop should be regarded as being more important that selectivity in the destruction of unwanted plants.

Dr. Ferguson showed a number of slides which pictured test plots on which various new compounds had been tried. The selectivity was evident in many of the experiments with both pre-emergence and post-emergence treatments.

The speaker reported on a number of new compounds presently under examination, some of which he said show great promise for selective use in certain crops.

Two products being offered by Geigy were reported on, with explanations of their chemical and physical properties. They are the product "Simazin" and compound 444.

Simazin has shown effectiveness against weeds such as carpetweed, wild carrot, wild onion, lambs quarters, narrow leaf plantain, purslane, ragweed and panic grass at dosages of 2 lb. or less an acre, Dr. Ferguson said.

The product was reported to be highly selective against corn which has been found tolerant at a dosage rate of 8 lb. an acre. Cotton is somewhat less tolerant, Dr. Ferguson said.

Compound 444 was described as an experimental pre-emergence and post-emergence herbicide. According to tests conducted during 1955, Dr. Ferguson said the compound has yielded favorable results after pre-emergent application on potatoes, black wheat and sugar cane. It was also effective as both pre- and post-emergent application on corn, cotton, vetch, carrots, onions and barley, he said.

Post-emergence success was obtained in tomatoes, tall fescue, sudan grass and common rye grass, Dr. Ferguson said.

DEALER BACKS DEMONSTRATION—The Rolla (Mo.) Feed Mill is cooperating in an interesting seed and fertilizer demonstration with the Rolla FFA chapter. The retail store furnished the seed corn, fertilizer and land at cost to the FFA group with profits to go entirely to the chapter. Above is a view of the demonstration plot. Ten different hybrids and one open pollinated type of corn are being tested for maturity, qualities and productivity. The 15 acres were brought up to recommended plant food requirements and an additional quantity of 12-12-12 fertilizer was used on all varieties. In a further test, one hybrid received three different levels of nitrogen fertilizer. Murray Renick of the Rolla Feed Mill states that the FFA members planted and cultivated the corn.

J. Myron Maxwell Heads Carolinas-Virginia Association

PINEHURST, N.C. — J. Myron Maxwell, Maxwell Insecticide Co., Raleigh, N.C., was named president of the Carolinas-Virginia Pesticide Formulators Assn. at the group's annual meeting here Oct. 8-10. He succeeds W. P. Crown, Carolina Chemical Co., Inc., West Columbia, S.C.

Other officers elected at the meeting included: George Simches, Planters Chemical Corp., Norfolk, first vice president; John Daly, Daly Herring Co., Kingston, N.C., second vice president, and W. R. Peele, W. R. Peele Co., Inc., Raleigh, secretary-treasurer. Mr. Peele was reelected to his position.

All of the officers are automatically members of the board. Mr. Crown as immediate past president is an ex officio member.

In addition the group selected Frank Reed, Quality Chemical Co., Wilson, N.C., and John Thompson, Graham Chemical Co., Greensboro, N.C., as board members.

Rain Slows Harvest, But Helps Pastures In Mid-South States

MEMPHIS — Mid-South farmers got too much of a good thing last week—something that would have helped them greatly two or three months ago.

Rain slowed the harvesting of the cotton crop, which had been slashed rather heavily by the drouth. It damaged the crop some, but helped fall pastures and cover crops.

Extension agents in Arkansas, Mississippi and Tennessee in their weekly crop survey said moisture was sufficient for planting small grains, germinating planted winter grazing crops and easing forest fire hazards, something that has been occupying the attention of farmers and conservationists.

Damage to the cotton crop was not severe, and officials said from 50 to 60% of the crop had been gathered. Progress also was reported in the harvest of rice and soybeans.

Cotton picking was halted in many areas of Mississippi by rains which knocked a good bit of seed cotton from bolls, the Mississippi Agricultural Extension Service said. T. M. Waller, cotton specialist, said picking was more than half completed and grades and staples are holding up well.

Rains greatly aided fall truck crops, helped improve yields of late sweet potatoes and possibly improved quality of pecans, Chesley Hines, extension horticulturist, said.

Most Mississippi cattle are infested with cattle lice and horn-flies, said A. G. Bennett, extension entomologist, who advised retreating back-rubbers and spraying animals.

Scattered rains slowed harvests in Arkansas but increased the plantings of small grain and cover crops. C. A. Vines, associate director of the Agricultural Extension Service, said harvesting operations were back in full swing.

The western part of the state still is "awfully dry," and a request for federal drouth relief is pending in about 14 counties in that section, he added.

The State Drouth Committee asked the Department of Agriculture to reconsider a refusal of drouth aid to the counties.

More than half the West Tennessee cotton crop has been picked and the major farm problem is fall pastures.

Although early corn is showing good, late corn in many areas has been severely damaged by the dry spell. County agents said at least 60% of the area's cotton has been gathered but picking will continue to take top priority.

T FLORIDA MEETING—Pictured above are industry people at the recent nnual convention of the Florida Fruit and Vegetable Assn. at Miami Beach. t top left, from left to right, are Rue Lane Brown, Davison Chemical Co., t. Pierce; Ralph F. Allen, American Cyanamid Co., Atlanta; Mrs. Brown; oe P. Barnett, Tampa, and Robert O. Kirkland, American Cyanamid Co., rlando. Top right are Lou Lipman, Six L's Packing Co., Imokalee, Fla., and . C. Hector, Hector Supply Co., Miami. Lower left are William S. Plumer, lades Chemical Co., Pahokee, Fla., and Charles F. Daly, West Coast Fertiizer Co., Tampa. At lower right are Laurin Smith, Tennessee Corp., Atlanta; ames E. Murray, Tennessee Corp., Atlanta, and Arthur M. Smith, Olin Mathieson Chemical Corp., Baltimore.

Medfly Must Go, Florida Fruit and Vegetable Convention Told

MIAMI BEACH, FLA. — Attendnce at the recent annual meeting of he Florida Fruit and Vegetable ssn. here was liberally sprinkled ith representatives of the farm hemical industry.

The meeting had a total attendance f 1,400, largest since the association as formed in 1942.

Members of the association produce bout 90% of Florida's vegetables, nd on hand to join with them in heir convention were representatives om fertilizer, pesticide, seed, equipent and allied firms.

They heard Ed L. Ayers, plant commissioner, Florida State Plant Board, tell the fruit and vegetable men that complete eradication of the Mediterranean fruit fly is necessary because the cost of living with the pest would be prohibitive.

Basing estimates on conditions in pain and Israel, it was estimated hat the cost of having the fly in lorida would be about 20 million ollars per year. The Mediterranean uit fly attacks about 100 fruits and egetables; and although the fly refers a warm climate, Mr. Ayers aid that there is a possibility that it ould survive in other southern states.

Pointing out new tools available, Ir. Ayers said that it is hoped that he eradication program will be near ompletion in time for the coming hipping season. He said that aerial praying with malathion and ground reatments of dieldrin should give 00% control.

Mr. Ayers cited figures on how the 5 million dollars from federal funds and 5 million from state funds were being used. He said that 709 thousand acres had been sprayed and repeat sprayed until total amounted to 3,600,000 acres. For this, 6 million pounds of malathion were used and 641 tons of dieldrin were used for on the ground treatment of 25,613 acres.

According to Mr. Ayers, the proram is proceeding according to plan, nd he predicts that only a few, if ny, flies will be left anywhere in lorida within another month or two. le stressed that it is essential to ontinue the program until sure that he last fly is killed.

Color movies were used to show the estruction caused by the fly, and the eans used to combat it.

James B. Owens, truck crop statistician, U.S. Department of Agriculture, warned fruit and vegetable men against overplanting. Mr. Owens said that last year an acreage increase of 3% resulted in 1½ more volume and 3% less money.

Mr. Owens said that prices would probably be relatively good next year in spite of a major increase in the volume of some items. At the same time, he cited the danger of overplanting in tomatoes, cabbage, celery, and potatoes.

The fall, winter and spring demand in Florida next year is expected to be as high as in 1956 in canned snap beans and frozen snap beans.

Canned tomatoes and tomato production are expected to be somewhat larger than in 1956, and well above 1955. Competition from foreign tomato growers was said to have been down for the past two years, and not likely to increase in 1957. Nevertheless, Mr. Owens recommended a planting of 14% less than in 1956 as being sufficient to produce an adequate amount of tomatoes.

This year's production of snap and pole beans was 7,064,000 bu. This was 12% less than the 1955 crop, and Mr. Owens said that about the same amount should be needed in 1957.

Reports indicate that 24,000 acres of potatoes will be planted instead of the 16,000 recommended. Mr. Owens said this may cause trouble unless the surplus could be used for potato chips.

A reduction was recommended for cabbage, with 15,000 acres being suggested as adequate instead of the 16,500 acres planted in 1956.

Celery was also recommended for an acreage reduction; 1956 production of 6,603,000 crates was more than needed.

Sweet corn production in 1957 is estimated at 5,774,000 crates which should be enough to meet the need. This year's production was 6,782,000 crates.

R. C. Hector, president of Hector Supply Co. of Miami, summed up the importance of this meeting as follows: "Because of the volume of business done by members of the Florida Fruit & Vegetable Assn., we had five representatives from our company at the meeting. This is one opportunity for the supplier and customer to get together each year and discuss mutual problems."

"We feel," went on Mr. Hector, "that the association is doing a good work which benefits packers, sellers and other phases of the industry in addition to growing."

Hector Supply Co. was one of about 50 firms and individuals sponsoring Suppliers' Hospitality Night at the convention.

All of last year's officers of the Florida Fruit & Vegetable Assn. were reelected for another year. They are: Rudolph Mattson, Fort Pierce, president; Andrew Duda, Jr., Oviedo, vice president, and Joffre C. David, Orlando, secretary-treasurer and general manager.

L. Gordon Bywater Named Superintendent Of Geneva Plant

PROVO, UTAH—L. Gordon Bywater has been appointed superintendent of the new anhydrous ammonia plant now under construction at U.S. Steel's Geneva Works, it was announced Oct. 7 by E. V. Boorman, division superintendent — coke and coal chemicals at this Columbia-Geneva Steel Division plant.

A native of Salt Lake City, Mr. Bywater is a graduate of the University of Utah with a B.S. degree in mechanical engineering. He has been serving as project engineer during the construction of the new chemical plant at Geneva.

He joined U.S. Steel in 1942 when he commenced work at the Ironton plant near Provo. Since that time he has been promoted to various positions in the engineering and blast furnace departments at Ironton and Geneva Works. Prior to his transfer to the anhydrous ammonia project, he served as general supervisor—power and fuel engineering at Geneva.

During World War II Mr. Bywater served in the navy and he still is active in one of the Utah naval reserve units. He and his wife, Helen, and their daughter, Terrel, live at 1258 North Jordan Ave. in Provo.

John M. Hooper

Wilson & George Meyer Announces Promotions

SAN FRANCISCO — L. N. West, executive vice president, Wilson & George Meyer & Co., announced here three important personnel advancements involving the Portland, Oregon and Los Angeles, Cal. district offices of the firm, effective Nov. 1.

Mr. West said John M. Hooper, manager of the Portland office since 1952, will be promoted to Los Angeles to be manager of agricultural chemical sales in the Pacific Southwest.

Clifford S. Culley, with ten years service in the Los Angeles office, will become manager of the Portland office, succeeding Mr. Hooper.

Thomas H. Lathe, who has been with the firm many years, will become manager of the newly formed market development department, Pacific Southwest territory, with headquarters in the Los Angeles office.

Mr. Hooper, a graduate of Washington State College, is a marine corps veteran. Last year, he was chairman of the grasslands committee of the Portland Chamber of Commerce.

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Family Farm Still Holding Its Own, T. D. Morse Says

Conversations with many persons in the agricultural field during the past several months, have indicated a rather widespread impression that the "family farm" in the U.S. is rapidly being replaced by larger units operated on a more business-like basis.

That such a trend is in the making is undoubtedly true, with the question being one of degree and the speed with which it is being done.

Along this line, it is interesting to note some figures quoted recently by True D. Morse, assistant Secretary of Agriculture, who states that the proportion of family farms to the total number of farms in the U.S., has held steady in recent years. "There has been no change in the proportion of the total number of farms operated by families in the past 15 years," he declared.

Quoting figures for 1954, Mr. Morse pointed out that in that year, family farms produced about the same share, roughly two-thirds, of the total agricultural output as they did in 1940. They also control approximately the same proportion of the total acreage in farms as in 1940, he says.

Continuing his quoting statistics on the family-operated farm for 1954, Mr. Morse reports that this type of operation comprised about 97% of all farms in the U.S., while "large-scale" units represented only about 3% of the total. Furthermore, family farms controlled about three quarters of all land in farms in the U.S. both in 1954 and 1940, he added.

Farm tenancy, he reported, is at an all-time record low. The percentage of farmers who are full or part owners of the farms they operate, stood at slightly more than 75% in 1954, an increase of two points over 1949. This, he says, is an all-time record high.

A comparison of the number of family workers, which comprise farmers and members of their families, and hired workers in agriculture for the past 15 years, also indicates the increasing strength of family-type farming in the U.S., Mr. Morse says.

Because of mechanization, new crops, and chemicals, as well as other improvements in production, the number of all workers in agriculture declined from 1940 to 1954. Numbers of hired workers, however, declined more rapidly. In 1954, there were 28% fewer hired workers in American agriculture than in 1940. Increasing mechanization allows family farms to operate with less hired labor than in previous years.

Farms have increased in size from an average of 174 acres in 1940 to 242 acres in 1954, an increase of 68 acres per farm. Even so, the farms continue to be family operated, Mr. Morse explained.

Each year over one million acres of farm land are taken over by expanding cities, industries, roads, highways, airports and other non-farm uses. This, plus the growing size of farms, has reduced the number of farms.

"Authorities generally agree that the family farm will continue to dominate American agriculture," the USDA official said. "The family farm is not only being preserved but strengthened. These census figures confirm other information we have that point to the solid foundation of family farming in the Nation.

"The most recent figures reported by the Department show farmers' assets at a new high—$170 billion (as of Jan. 1, 1956). This marks a $3.5 billion increase over the previous year. Assets increased three times as fast as debts.

"Farmers as a whole continue to maintain their solid record of only about $1 of debt to $9 worth of money and property they own. About 7 out of 10 farmers have no mortgage debt. Farm foreclosures are near record low."

Mr. Morse explained further that various programs of the Department of Agriculture are designed to give more strength to family farming in American agriculture. Increased research, new authority for credit, more extension assistance to small farmers, increased budgets for conservation work, and the soil bank, are examples.

"Recent census data and other economic indicators prove the real strength of family farms. New public programs will help all family farmers to maintain their position in American agriculture," Mr. Morse concludes.

The significance of what Mr. Morse has to say on how the family farm is holding its own, lies not so much in the academic nor sociological realm, as it does in the way it will affect sales efforts of the trades supplying these farmers. Dealers and manufacturers of pesticides and fertilizers, seeds and weed killers and of many other items used on farms, will continue to sell to farmer Jones and probably to his sons in future years.

Problems of selling and merchandising these items will of course continue, but it is encouraging to note an awareness on the part of farmers that these chemical helps are here to stay, and that they can bolster income through following recommendations of state experiment stations.

Role of Advertising

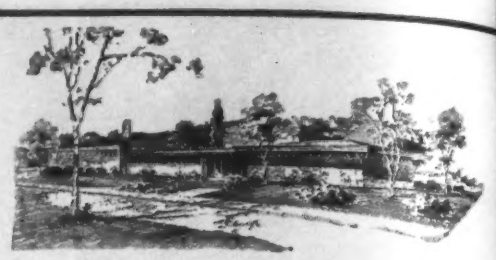
A capsule summary of the role of advertising was aptly presented by Sigurd Anderson, commissioner, Federal Trade Commission, Washington, at the recent New Jersey Fertilizer Conference. We quote:

"Advertising is of great value in our modern business world. The educational features of advertising cannot be overstressed. Countless ideas are brought to the attention of the public through all advertising media.

"The peoples of the twentieth century would be less educated and less literate if advertising material were not presented for their consideration. Much of advertised matter would never be carried in the form of purely educational articles, for the reason that it would not be read if put in regular literary form.

"Consider your own case: If advertising material were removed from your newspapers, magazines and other periodicals and were eliminated from radio and television, a certain void would be created. The materials of advertising help educate readers and listeners and viewers. Many of the new products on the market that are never bought constitute a part of the educational knowledge of the people of our land.

"In the same vein, advertising is informational. This informational phase of advertising may well be considered to be somewhat educational and possibly I should not belabor the point. I have discovered that much of my appreciation of life in the past can be explained by the advertisements about the products that constituted a part of the life of people of yesterday. Let me suggest that you take a copy of "The Review of Reviews" or "World's Work" or "The Saturday Evening Post," or any magazine, whether now being published or not, and read the advertisements and see the pictures pertaining to those advertisements and determine if that material does not help you understand the life of our citizens of 20, 30, 40, or more years ago. I do not believe it can be debated that advertising has educational and informational value of great importance."



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MEETING MEMOS

ct. 15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

ct. 16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

ct. 16-18—Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C. Vincent Sauchelli, Chief Agronomist, Davison Chemical Co., Div. W. R. Grace Co., Baltimore 3, Md., chairman.

ct. 16-18—Canadian Agricultural Chemicals Assn., Fourth Annual Meeting and Conference, Sheraton-Brock Hotel, Niagara Falls, Ontario.

ct. 18-19—Association of American Fertilizer Control Officials, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Clemson Agricultural College, Clemson, S.C., secretary-treasurer.

ct. 22-23—Fertilizer Section, National Safety Council, La Salle Hotel, Chicago, Ill.; Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., chairman.

ct. 23-24—Pacific Northwest Garden Supply Trade Show, Shrine Auditorium, Portland, Ore.

ct. 24—Central California Agricultural Forum, Bakersfield Inn, Bakersfield, Cal., David N. Wright, Box 791, Bakersfield, Secretary.

ct. 25—Middle West Soil Improvement Committee, Annual Meeting, Sherman Hotel, Chicago; Z. H. Beers, Executive Secretary, 228 N. La Salle St., Chicago 1, Ill.

ct. 30-31 — Washington State College Aerial Dusting and Spraying Conference, Walla Walla, Wash.

ov. 1-3—Annual Aerial Applicators Conference of National Aviation Trades Assn., Chase Hotel, St. Louis, Mo. Charles A. Parker, Executive Director, 1346 Connecticut Ave., Washington 6, D.C.

ov. 2—Southern Soil Fertility Conference, Atlanta-Biltmore Hotel, Atlanta, Ga.

ov. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

ov. 7-9 — Pacific Northwest Plant Food Assn., Annual Convention, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Leon S. Jackson, Lewis Bldg., Portland, Ore., secretary.

ov. 8—Ninth Annual Fertilizer Dealers Short Course, Iowa State College, Ames, Iowa.

ov. 9—Session for Fertilizer Industry, South Carolina Accident Prevention Conference, Jefferson Hotel, Columbia, S.C.

ov. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

ov. 13-15—18th Annual New York State Insecticide and Fungicide Conference and 9th Annual Pesticide Application Equipment Conference, Bibbins Hall, Cornell University, Ithaca, N.Y.

ov. 15-16—Washington State College Weed Conference, Pullman, Wash.

ov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

Nov. 19-20—Ohio Pesticide Institute winter meeting, Neal House, Columbus, Ohio.

Nov. 27-28—Indiana Fertilizer Conference, Memorial Union, Purdue University, Lafayette, Ind.

Nov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

Nov. 29—New Jersey Pesticide Dealers Conference, Rutgers University, New Brunswick, N.J.

Nov. 29-Dec. 1 — Washington State College Ground Applicators Short Course, Puyallup, Wash.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 13-14—Soil Fertility and Plant Nutrition Short Course, University of Missouri, Columbia, Mo.

Dec. 13-14—Cotton Production Conference, The Titwiler, Birmingham, Ala.

Dec. 12—American Society of Agricultural Engineers, Power and Machinery Section, in Cooperation with the National Joint Committee on Fertilizer Application, Edgewater Beach Hotel, Chicago.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

1957

Jan. 8-9—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 10-12—Northeastern Weed Control Conference, McAlpin Hotel, New York.

Jan. 23-25 — Southern Weed Conference, Bon Aire Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2 — Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal., Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

Feb. 4-6—Cotton States Branch, Entomological Society of America, Birmingham, Ala. W. G. Eden, secretary-treasurer, Alabama Polytechnic Institute, Auburn, Ala.

June 26-28 — Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Hopper Survey

FARGO, N.D.—A survey of 1956 grasshopper control operations in North Dakota is being made with the help of county agents, according to Wayne Colberg, North Dakota Agricultural College extension entomologist. Information is being obtained on the number of acres of cropland sprayed in 1956 for grasshoppers, the insecticides used and on the success of county grasshopper control programs.

William F. Scupine Roy C. Jones

APPOINTED—Two new appointments in the sales department of the Atlanta branch of Fulton Bag & Cotton Mills have been announced. Roy C. Jones has been appointed assistant manager of the canvas and pad department while William F. Scupine has been appointed sales representative for Atlanta and the surrounding area. Mr. Jones joined the Fulton organization in general office work and has advanced through a series of progressive promotions. Prior to his new appointment, he was Atlanta sales supervisor of cotton bags. Mr. Scupine attended Duke University where he lettered in both football and track and graduated with a B.A. degree. Prior to joining Fulton, he was active in sales and engineering work for several large companies. Fulton's Atlanta branch, located at 170 Boulevard S.E., is headed by Tom R. Moore.

National Safety Council Yearbook Available

CHICAGO—The 1956 edition of the National Safety Council's statistical yearbook, "Accident Facts," is now available. The volume contains facts and figures on all types of accidents —industrial, traffic, home, farm and school.

Twenty pages of the book are devoted exclusively to occupational accidents and provide the factual background necessary to give direction to an industrial safety program. There is a detailed list of accident rates by major industry groups, as well as charts showing the accident trend during the past 30 years. Most common source of injuries, part of body most frequently injured, off-the-job accident problems, unsafe acts and unsafe conditions contributing to permanent impairments and deaths, and other topics are included.

"Accident Facts" is priced at $1 a single copy and less for quantities. Inquiries should be sent to the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

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Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

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Weevil Bulletin

WASHINGTON — A new 6-page Farmers' Bulletin on the clover leaf weevil is now available from the U.S. Department of Agriculture. Single copies of the bulletin, the Clover Leaf Weevil and Its Control (FB No. 1484) may be obtained free from the Office of Information, U.S. Department of Agriculture, Washington 25, D.C.

Moves Sales Office

TULSA—The Grand River Chemical Division of Deere & Co. has announced the move of its sales office to the general office at Pryor, Okla., effective Oct. 8. The sales office formerly was in Tulsa. The new address is P.O. Box 1417 and the new telephone number is 4000.

INDEX OF ADVERTISERS

Allied Chemical & Dye Corp., Nitrogen Division
American Potash & Chemical Corp.
Anco Manufacturing & Supply Co.
Ashcraft-Wilkinson Co. 17

Baughman Manufacturing Co., Inc.
Beaird, J. B., Co.
Bemis Bro. Bag Co.
Blue, John, Co.
Bonneville, Ltd.
Bradley & Baker
Broyhill Company 6
Butler Manufacturing Co.

California Spray-Chemical Corp.
Chase Bag Co.
Commercial Solvents Corp. 7
Consolidated Mining & Smelting Co.

Davison Chemical Co.
Deere & Co., Grand River Chem. Div.
Douglas Chemical Company
E. I. du Pont de Nemours & Co., Inc.

Elano Corp.

Farm & Ranch
Flint Steel Corporation 19

Hahn, Inc.
Hercules Powder Co.
Hough, Frank H., Co.

International Minerals & Chemical Corp.

Johns-Manville Corp. 5

Kelly Ryan Equipment Co.
Kent, Percy, Bag Co. 8
Kraft Bag Corp.

Meredith Publishing Co.
Miller Publishing Co., The 21
Minerals & Chemical Corp. of America
Mississippi River Chemical Co.
Monsanto Chemical Co.

National Potash Co.
Naugatuck Chemical Div., U. S. Rubber Co.
Nitrogen Div., Allied Chemical & Dye Corporation

Olin Mathieson Chemical Corp.

Pacific Coast Borax Co.
Penick, S. B., & Co.
Pennsylvania Salt Mfg. Co. of Washington
Phillips Chemical Co. 8
Potash Company of America 3
Private Brands, Inc. 13

Rieke Metal Products Corp. 21

Shell Chemical Corp.
Sinclair Chemicals, Inc. 4
Smith-Rowland Co., Inc.
Spencer Chemical Co.
Stauffer Chemical Co.
Stewart-Warner Corp. 15
Successful Farming 2

Tennessee Corp.
Tiger Chemical Co.

Union Bag-Camp Paper Corp.
U. S. Phosphoric Products Division
U. S. Potash Co.
U. S. Rubber Co., Naugatuck Chem. Div.
U. S. Steel Corp. 11

Velsicol Chemical Corp.
Virginia-Carolina Chemical Corp.
Vulcan Containers, Inc. 18

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